

Spruhan
Engineering, P.C.
80 JEWETT ST. (SUITE 1)
NEWTON, MA 02458
Tel: 617-816-0722
Email: espruhan@gmail.com

383-387 BOYLSTON
STREET
NEWTON
MASSACHUSETTS

SURVEY PLAN

REVISION BLOCK

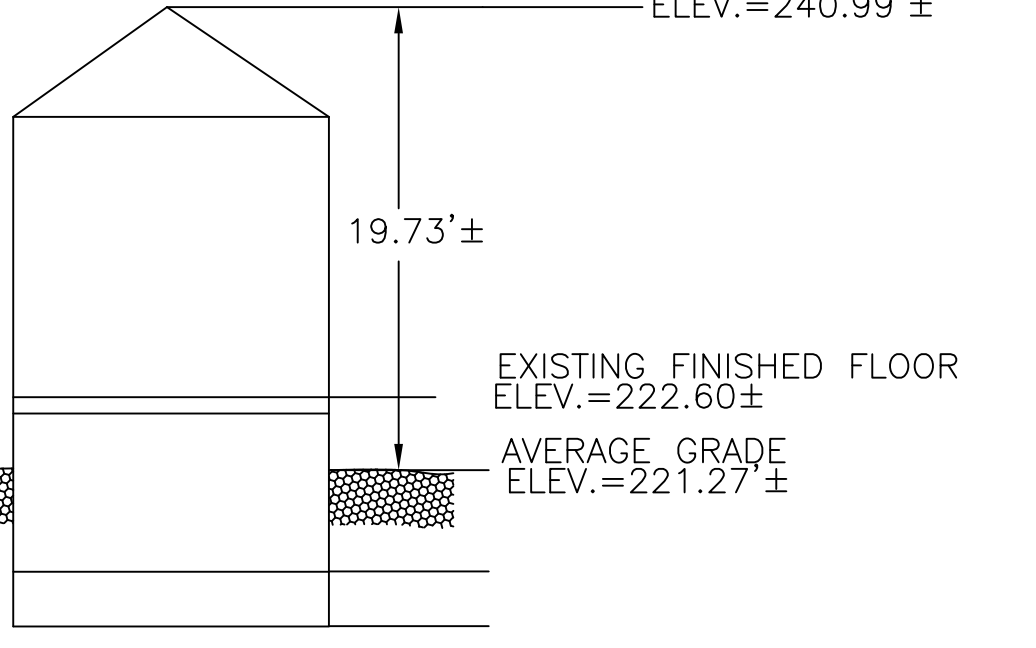
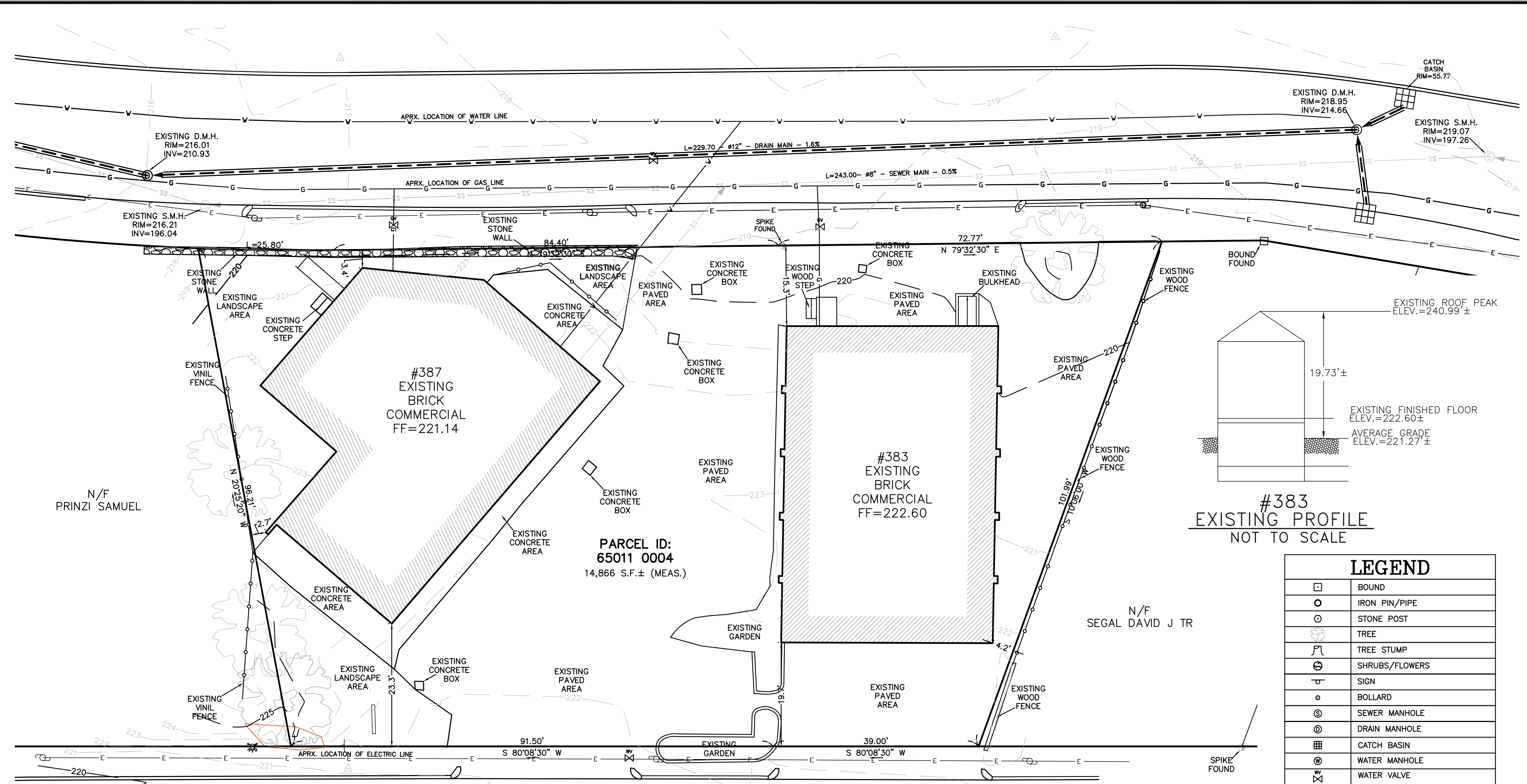
DESCRIPTION	DATE

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DATE:	12/04/2020
DRAWN BY:	A.G.
CHECKED BY:	E.S.
APPROVED BY:	E.S.

EXISTING
CONDITIONS



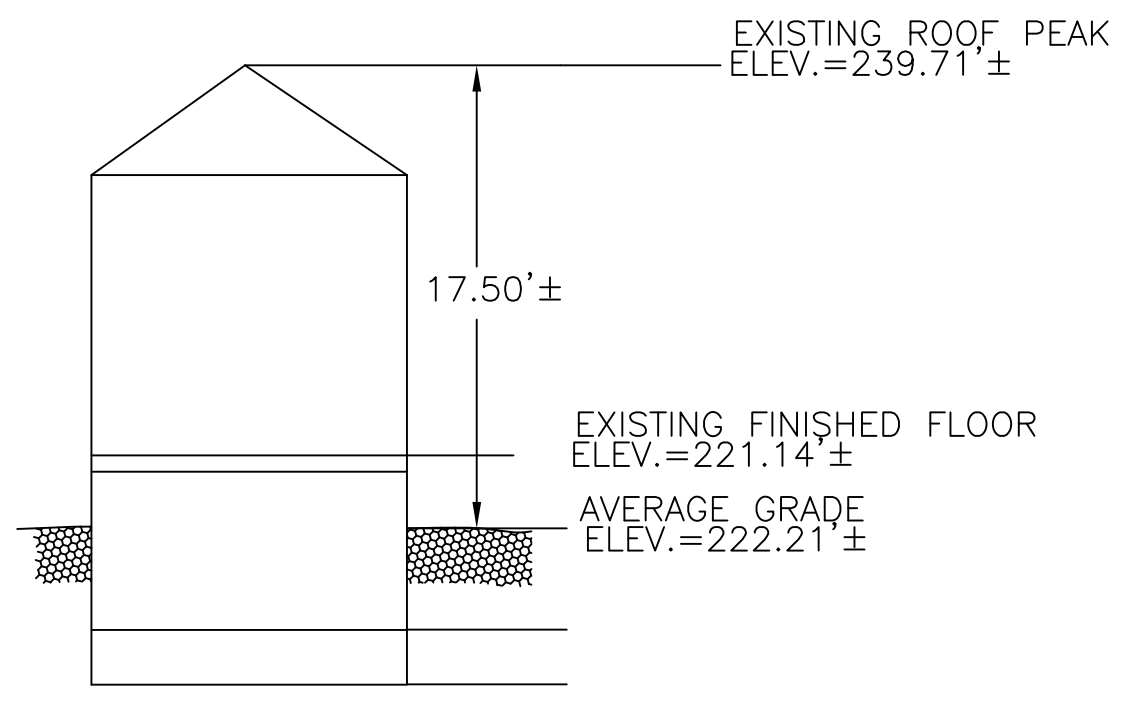
LEGEND

	BOUND
	IRON PIN/PIPE
	STONE POST
	TREE
	TREE STUMP
	SHRUBS/FLOWERS
	SIGN
	BOLLARD
	SEWER MANHOLE
	DRAIN MANHOLE
	CATCH BASIN
	WATER MANHOLE
	WATER VALVE
	HYDRANT
	GAS VALVE
	ELECTRIC MANHOLE
	ELECTRIC HANDHOLE
	UTILITY POLE
	LIGHT POLE
	MANHOLE
	SPOT GRADE
	TOP OF WALL
	BOTTOM OF WALL
	EXISTING BUILDING
	RETAINING WALL
	STONE WALL
	FENCE
	TREE LINE
	SEWER LINE
	DRAIN LINE
	WATER LINE
	GAS LINE
	UNDERGROUND ELECTRIC LINE
	OVERHEAD WIRES
	CONTOUR LINE (MJR)
	CONTOUR LINE (MNR)

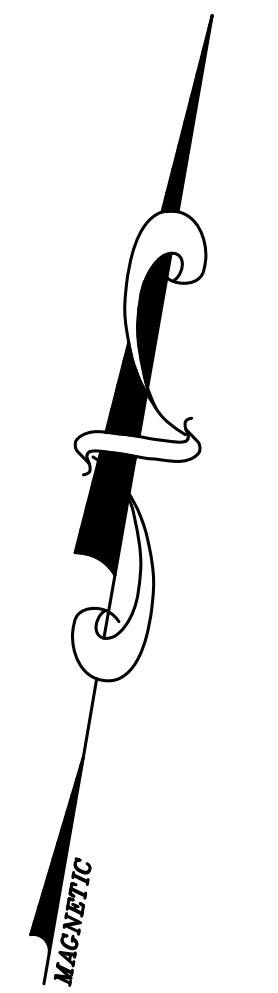
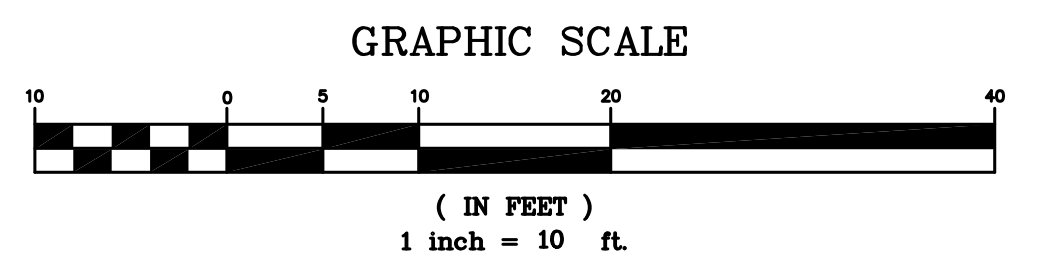
- NOTES:
1. INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY SPRUHAN ENGINEERING, P.C. AS OF 12-02-2020.
 2. DEED REFERENCE: BOOK 67500 PAGE 552
PLAN REFERENCE: BOOK 11763 PG 603
MIDDLESEX REGISTRY OF DEEDS.
 3. THIS PLAN IS NOT INTENDED TO BE RECORDED.
 4. I CERTIFY THAT THE DWELLING SHOWN IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE X, ON FLOOD HAZARD BOUNDARY MAP NUMBER 25017C0558E, PANEL NUMBER 0558E, COMMUNITY NUMBER: 250208 DATED 06/04/2010
 5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT USES OF THE LAND; HOWEVER THIS NOT CONSTITUTE A GUARANTEE THAN NO SUCH EASEMENTS EXIST.
 6. FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD.
 7. THE ELEVATIONS SHOWN ARE BASED ON CITY OF NEWTON DATUM.
 8. ZONING DISTRICT - BUI, LOT CREATED AFTER DEC. 7TH 1953

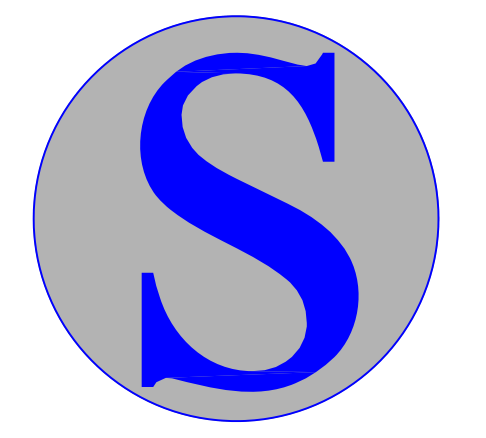
BOYLSTON STREET

(PUBLIC WAY)



#387
EXISTING PROFILE
NOT TO SCALE





Spruhan Engineering, P.C. 80 JEWETT ST. (SUITE 1) NEWTON, MA 02458

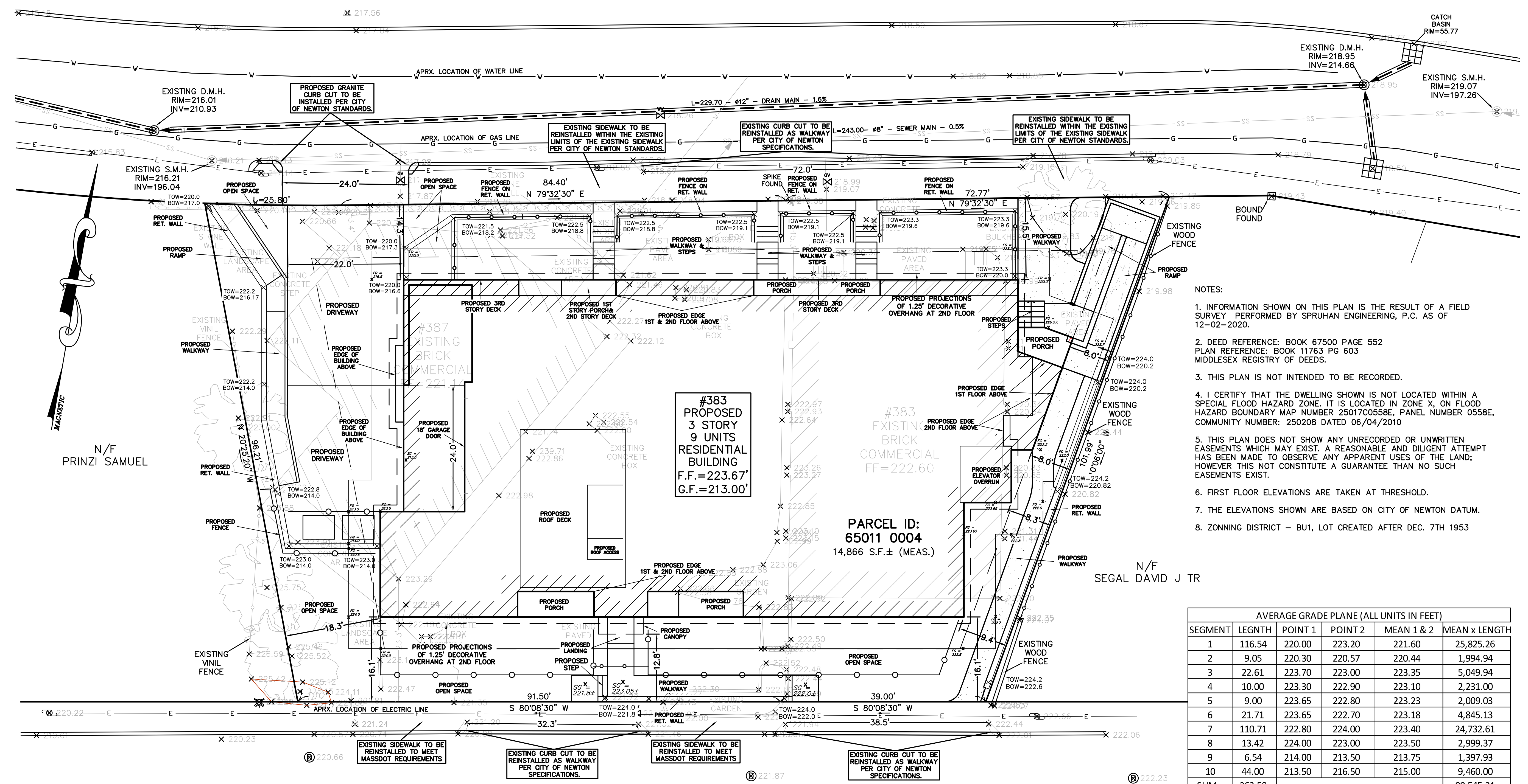
383-387 BOYLSTON STREET NEWTON MASSACHUSETTS

SURVEY PLAN

REVISION BLOCK

Table with 2 columns: DESCRIPTION, DATE. Includes revisions for updated per comments, architect request, and another architect request.

- NOTES: 1. INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY... 2. DEED REFERENCE: BOOK 67500 PAGE 552... 3. THIS PLAN IS NOT INTENDED TO BE RECORDED... 4. I CERTIFY THAT THE DWELLING SHOWN IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE... 5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS... 6. FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD... 7. THE ELEVATIONS SHOWN ARE BASED ON CITY OF NEWTON DATUM... 8. ZONING DISTRICT - BU1, LOT CREATED AFTER DEC. 7TH 1953



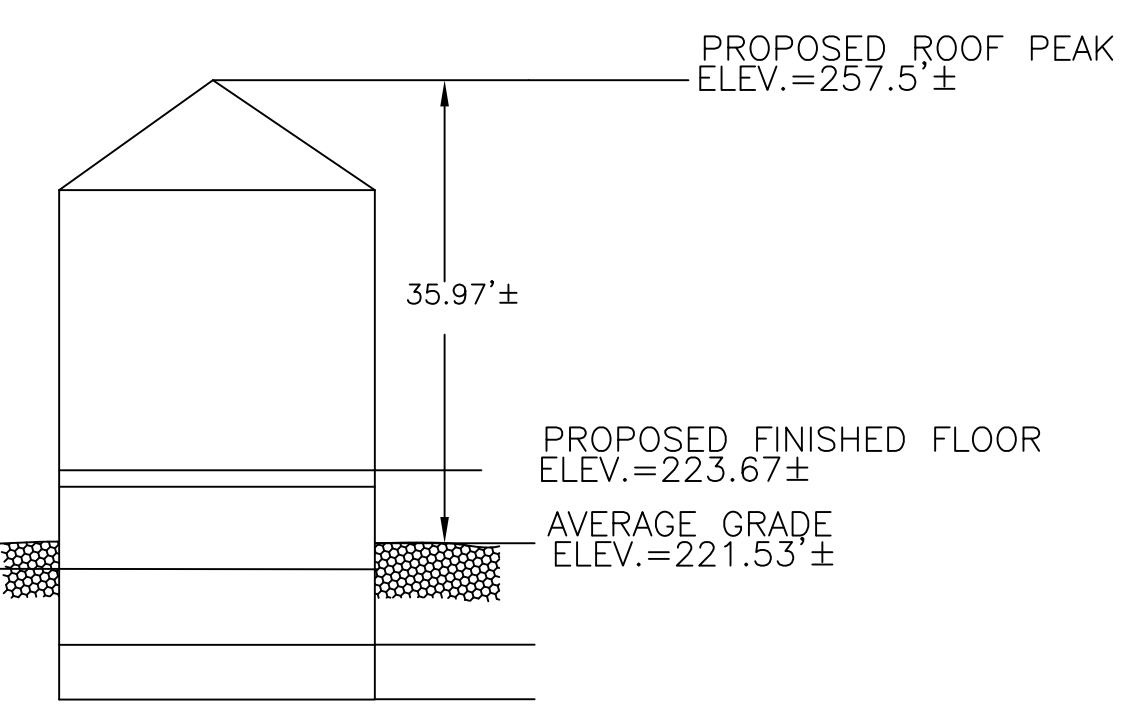
AVERAGE GRADE PLANE (ALL UNITS IN FEET) table with columns: SEGMENT, LENGTH, POINT 1, POINT 2, MEAN 1 & 2, MEAN x LENGTH. Includes a summary row for SUM and AVERAGE GRADE PL.

AVERAGE GRADE CALCULATION

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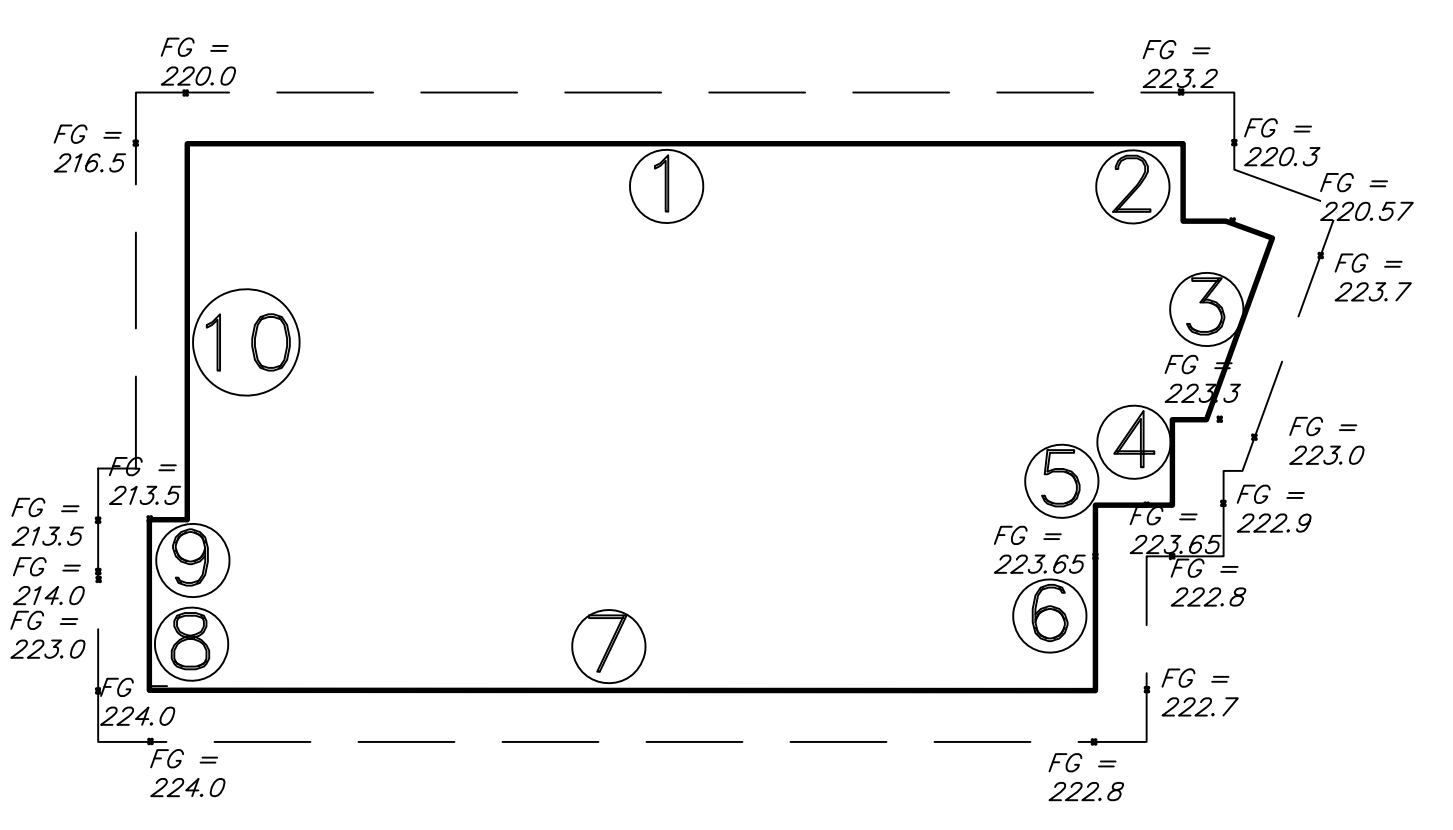
ZONING LEGEND table with columns: REQUIRED, EXISTING, PROPOSED. Rows include MIN. AREA, MIN. FRONTAGE, MIN. YARD FRONT, WEST SIDE, EAST SIDE, REAR, MAX. LOT COV., MIN. OPEN SPACE, MAX. BLDG. HEIGHT.

BOYLSTON STREET (PUBLIC WAY)

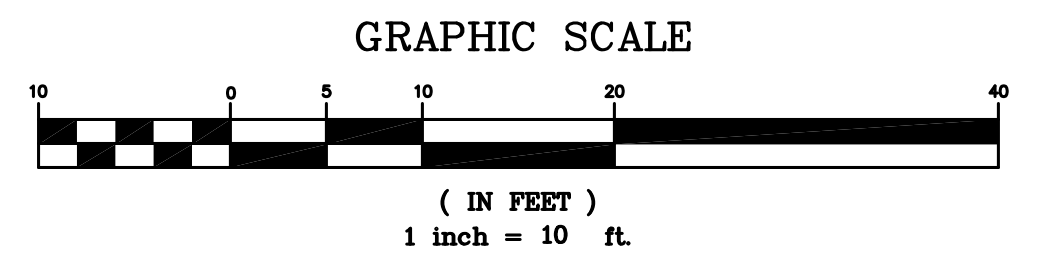


#383 PROPOSED PROFILE NOT TO SCALE

* MIDPOINT OF BASEMENT ELEVATION LOWER THAN AVERAGE GRADE ELEVATION THEREFORE PROPOSED BASEMENT MEETS DEFINITION OF BASEMENT



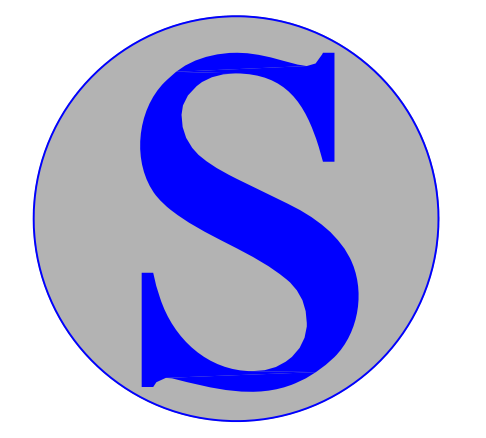
AVERAGE GRADE PLANE



DRAFT

Table with 2 columns: FIELD, DATE. Includes entries for DATE, DRAWN BY, CHECKED BY, and APPROVED BY.

PROPOSED GRADING PLAN



Spruhan Engineering, P.C.
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383-387 BOYLSTON STREET
NEWTON MASSACHUSETTS

SURVEY PLAN

REVISION BLOCK

DESCRIPTION	DATE
UPDATED PER ARCHITECT REQUEST	11/3/21
UPDATED PER ARCHITECT REQUEST	11/10/21

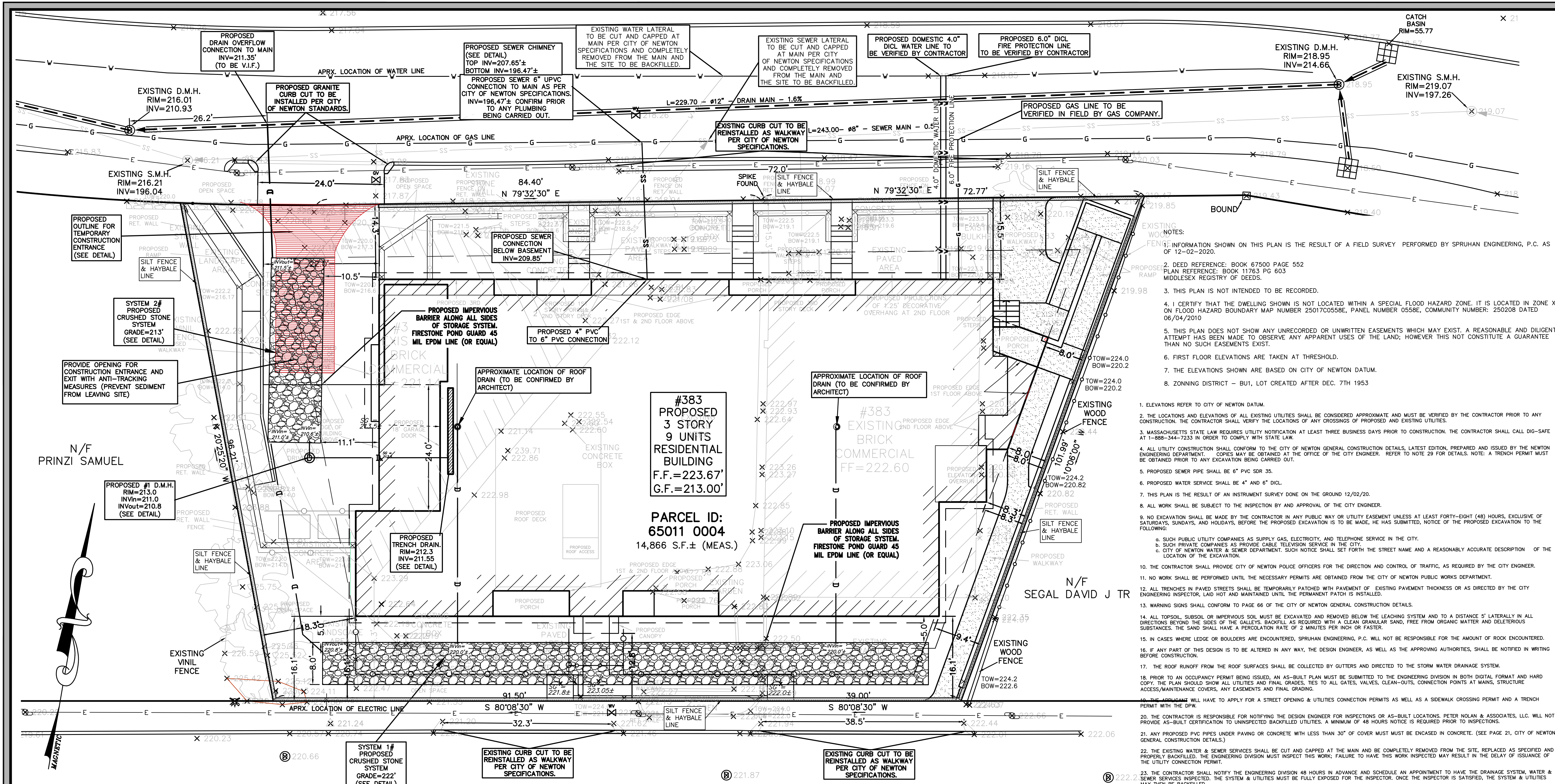
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DRAFT

DATE: 3/15/2021
DRAWN BY: D.K.
CHECKED BY: E.S.
APPROVED BY: E.S.

PROPOSED DRAINAGE AND UTILITIES PLAN

SHEET 3 OF 6



BOYLSTON STREET

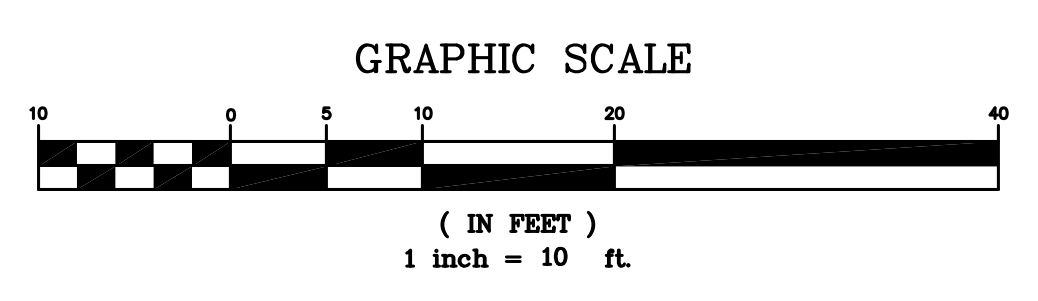
(PUBLIC WAY) SOIL LOG-1

DEEP OBSERVATION HOLE LOG
GENERAL SOIL CONDITIONS FOR THE AREA PERFORMED AT 383-387 BOYLSTON ST, NEWTON BY SPRUHAN ENGINEERING, P.C.
HOLE NUMBER: TP - 1 DATED: 4/8/21
GENERAL SITE CONDITIONS: GRASS AND TREES.

GRADE	DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	OTHER
220.0'-219.7'	0" - 4"	-	-	-	-	ASPHALT
219.7'-217.0'	4" - 36"	-	FILL	-	-	NONE
217.0'-215.0'	36" - 60"	B _w	L _{SAND}	10 YR 5/6	-	NONE
215.0'-213.0'	60" - 84"	C ₁	L _{SAND}	10 YR 5/6	-	NONE
213.0'-210.0'	84" - 120"	C ₂	L _{SAND}	7.5 YR 7/1	-	NONE

REFUSAL AT 120"

DRAINAGE AREA SUMMARY
 EXISTING ROOF AREA = 4,895.2 S.F.
 EXISTING PAVED AREA = 7,409.7 S.F.
 EXISTING CONCRETE AREA/LANDING/STEPS/BULKHEAD = 807.6 S.F.
 EXISTING LANDSCAPE AREA = 1,753.6 S.F.
 PROPOSED ROOF AREA = 7,489.5 S.F.
 PROPOSED PAVED DRIVEWAY = 1,355.62 S.F.
 PROPOSED IMPERVIOUS (WALKWAYS/DECK/STEPS/PORCH) = 1541.55 S.F.
 PROPOSED LANDSCAPE AREA = 4,479.33 S.F.
 TOTAL EXISTING IMPERVIOUS AREA = 13,112.5 S.F.
 TOTAL PROPOSED IMPERVIOUS AREA = 10,386.67 S.F.
 TOTAL DECREASE IN IMPERVIOUS AREA = 2,725.83 S.F.



- ELEVATIONS REFER TO CITY OF NEWTON DATUM.
- THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ANY CROSSINGS OF PROPOSED AND EXISTING UTILITIES.
- MASSACHUSETTS STATE LAW REQUIRES UTILITY NOTIFICATION AT LEAST THREE BUSINESS DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL DIG-SAFE AT 1-888-384-7433 IN ORDER TO COMPLY WITH STATE LAW.
- ALL UTILITY CONSTRUCTION SHALL CONFORM TO THE CITY OF NEWTON GENERAL CONSTRUCTION DETAILS, LATEST EDITION, PREPARED AND ISSUED BY THE NEWTON ENGINEERING DEPARTMENT. COPIES MAY BE OBTAINED AT THE OFFICE OF THE CITY ENGINEER. REFER TO NOTE 29 FOR DETAILS. NOTE: A TRENCH PERMIT MUST BE OBTAINED PRIOR TO ANY EXCAVATION BEING CARRIED OUT.
- PROPOSED SEWER PIPE SHALL BE 6" PVC SDR 35.
- PROPOSED WATER SERVICE SHALL BE 4" AND 6" D.I.C.
- THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY DONE ON THE GROUND 12/02/20.
- ALL WORK SHALL BE SUBJECT TO THE INSPECTION BY AND APPROVAL OF THE CITY ENGINEER.
- NO EXCAVATION SHALL BE MADE BY THE CONTRACTOR IN ANY PUBLIC WAY OR UTILITY EASEMENT UNLESS AT LEAST FORTY-EIGHT (48) HOURS, EXCLUSIVE OF SATURDAYS, SUNDAYS, AND HOLIDAYS, BEFORE THE PROPOSED EXCAVATION IS TO BE MADE, HE HAS SUBMITTED, NOTICE OF THE PROPOSED EXCAVATION TO THE FOLLOWING:
 - SUCH PUBLIC UTILITY COMPANIES AS SUPPLY GAS, ELECTRICITY, AND TELEPHONE SERVICE IN THE CITY.
 - SUCH PRIVATE COMPANIES AS PROVIDE CABLE TELEVISION SERVICE IN THE CITY.
 - CITY OF NEWTON WATER & SEWER DEPARTMENT. SUCH NOTICE SHALL SET FORTH THE STREET NAME AND A REASONABLY ACCURATE DESCRIPTION OF THE LOCATION OF THE EXCAVATION.
- THE CONTRACTOR SHALL PROVIDE CITY OF NEWTON POLICE OFFICERS FOR THE DIRECTION AND CONTROL OF TRAFFIC, AS REQUIRED BY THE CITY ENGINEER.
- NO WORK SHALL BE PERFORMED UNTIL THE NECESSARY PERMITS ARE OBTAINED FROM THE CITY OF NEWTON PUBLIC WORKS DEPARTMENT.
- ALL TRENCHES IN PAVED STREETS SHALL BE TEMPORARILY PATCHED WITH PAVEMENT OF EXISTING PAVEMENT THICKNESS OR AS DIRECTED BY THE CITY ENGINEERING INSPECTOR. LOT HAD AND MAINTAINED UNTIL THE PERMANENT PATCH IS INSTALLED.
- WARNING SIGNS SHALL CONFORM TO PAGE 66 OF THE CITY OF NEWTON GENERAL CONSTRUCTION DETAILS.
- ALL TOPSOIL, SUBSOIL OR IMPERVIOUS SOIL MUST BE EXCAVATED AND REMOVED BELOW THE LEACHING SYSTEM AND TO A DISTANCE 8' LATEROALLY IN ALL DIRECTIONS BEYOND THE SIDES OF THE GALLEYS. BACKFILL AS REQUIRED WITH A CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND DELETERIOUS SUBSTANCES. THE SAND SHALL HAVE A PERCOLATION RATE OF 2 MINUTES PER INCH OR FASTER.
- IN CASES WHERE LEDGE OR BOULDERS ARE ENCOUNTERED, SPRUHAN ENGINEERING, P.C. WILL NOT BE RESPONSIBLE FOR THE AMOUNT OF ROCK ENCOUNTERED.
- IF ANY PART OF THIS DESIGN IS TO BE ALTERED IN ANY WAY, THE DESIGN ENGINEER, AS WELL AS THE APPROVING AUTHORITIES, SHALL BE NOTIFIED IN WRITING BEFORE CONSTRUCTION.
- THE ROOF RUNOFF FROM THE ROOF SURFACES SHALL BE COLLECTED BY GUTTERS AND DIRECTED TO THE STORM WATER DRAINAGE SYSTEM.
- PRIOR TO AN OCCUPANCY PERMIT BEING ISSUED, AN AS-BUILT PLAN MUST BE SUBMITTED TO THE ENGINEERING DIVISION IN BOTH DIGITAL FORMAT AND HARD COPY. THE PLAN SHOULD SHOW ALL UTILITIES AND FINAL GRADES, TIES TO ALL GATES, VALVES, CLEAN-OUTS, CONNECTION POINTS AT MAINS, STRUCTURE ACCESS/MAINTENANCE COVERS, ANY EASEMENTS AND FINAL GRADING.
- THE APPLICANTS WILL HAVE TO APPLY FOR A STREET OPENING & UTILITIES CONNECTION PERMITS AS WELL AS A SIDEWALK CROSSING PERMIT AND A TRENCH PERMIT WITH THE CITY.
- THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE DESIGN ENGINEER FOR INSPECTIONS OR AS-BUILT LOCATIONS. PETER NOLAN & ASSOCIATES, LLC. WILL NOT PROVIDE AS-BUILT CERTIFICATION TO UNINSPECTED BACKFILLED UTILITIES. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED PRIOR TO INSPECTIONS.
- ANY PROPOSED PVC PIPES UNDER PAVING OR CONCRETE WITH LESS THAN 30" OF COVER MUST BE ENCASED IN CONCRETE. (SEE PAGE 21, CITY OF NEWTON GENERAL CONSTRUCTION DETAILS.)
- THE EXISTING WATER & SEWER SERVICES SHALL BE CUT AND CAPPED AT THE MAIN AND BE COMPLETELY REMOVED FROM THE SITE, REPLACED AS SPECIFIED AND PROPERLY BACKFILLED. THE ENGINEERING DIVISION MUST INSPECT THIS WORK. FAILURE TO HAVE THIS WORK INSPECTED MAY RESULT IN THE DELAY OF ISSUANCE OF THE UTILITY CONNECTION PERMIT.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEERING DIVISION 48 HOURS IN ADVANCE AND SCHEDULE AN APPOINTMENT TO HAVE THE DRAINAGE SYSTEM, WATER & SEWER SERVICES INSPECTED. THE SYSTEM & UTILITIES MUST BE FULLY EXPOSED FOR THE INSPECTOR. ONCE THE INSPECTOR IS SATISFIED, THE SYSTEM & UTILITIES MAY THEN BE BACKFILLED.
- THE EXISTING CONTOURS OF THE LAND ARE NOT TO BE ALTERED BY MORE THAN THREE (3) FEET AS A RESULT OF THE PLACEMENT OR REMOVAL OF SOIL, LOAM, CLAY, GRAVEL OR STONE, OR OTHER SOLID MATERIAL, UNLESS A PROPOSED RETAINING WALL OR SWALE IS INSTALLED AFTER IT IS APPROVED BY BOTH CITY OF NEWTON ENGINEERING DEPARTMENT & CITY OF NEWTON I.S.D.
- NO WORK IS ALLOWED WITHIN A CITY OF NEWTON RIGHT-OF-WAY BETWEEN NOVEMBER 15TH AND APRIL 15TH. IF AN EMERGENCY EXISTS OR THERE ARE EXTENUATING CIRCUMSTANCES, APPLICANT MAY REQUEST PERMISSION FROM THE CITY ENGINEER. IF ALLOWED, SPECIAL CONSTRUCTION REQUIREMENTS WILL BE REQUIRED, AND AS SUCH IT IS RECOMMENDED THAT THE APPLICANT OR APPLICANT'S REPRESENTATIVE CONTACT THE CITY OF NEWTON ENGINEERING DEPARTMENT PRIOR TO START OF WORK FOR CLARIFICATION.
- AT THE END OF CONSTRUCTION, ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS.
- DURING CONSTRUCTION, THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT GENERATING MORE THAN 1/2" OF RAINFALL. THE EROSION CONTROL MEASURES SHALL BE CLEANED REGULARLY AND ADJUSTED IF NECESSARY TO ENSURE THAT NO SILT OR DEBRIS LEAVES THE SITE.
- WITH EXCEPTION OF GAS UTILITY SERVICES, ALL UTILITY TRENCHES WITHIN ANY CITY OF NEWTON RIGHT-OF-WAY MUST BE BACKFILLED WITH TYPE I/E (EXCAVATABLE) CONTROLLED DENSITY FILL, AS SPECIFIED BY THE CITY OF NEWTON ENGINEERING SPECIFICATIONS.
- ALL CONSTRUCTION ACTIVITIES WITHIN THE CITY OF NEWTON RIGHT-OF-WAY MUST FULLY COMPLY WITH ALL CITY OF NEWTON CONSTRUCTION SPECIFICATIONS AS WELL AS 521 CMR 21.00 AND 22.00.
- ALL NEW SEWER SERVICE AND/OR STRUCTURES SHALL BE PRESSURE TESTED OR VIDEOTAPED AFTER FINAL INSTALLATION IS COMPLETE. METHOD OF FINAL INSPECTION SHALL BE DETERMINED SOLELY BY THE CONSTRUCTION INSPECTOR FROM THE CITY ENGINEERING DIVISION. ALL SEWER MAINS SHALL BE VACUUM TESTED ACCORDING TO THE CITY'S CONSTRUCTION STANDARDS & SPECIFICATIONS. THE SEWER SERVICE WILL NOT BE ACCEPTED UNTIL ONE OF THE TWO METHODS STATED ABOVE IS COMPLETED. ALL TESTING MUST BE WITNESSED BY A REPRESENTATIVE OF THE ENGINEERING DIVISION. A CERTIFICATE OF OCCUPANCY WILL NOT BE RECOMMENDED UNTIL THIS TEST IS COMPLETED AND A WRITTEN REPORT IS RECEIVED BY THE CITY ENGINEER.
- ALL SILLATION CONTROL NEEDS TO BE INSTALLED PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE CITY ENGINEER'S OFFICE FOR APPROVAL PRIOR TO COMMENCEMENT.
- ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MGL CHAPTER 82A, TRENCH EXCAVATION SAFETY REQUIREMENTS, TO PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES. A TRENCH EXCAVATION PERMIT IS REQUIRED.
- APPROVAL OF THIS PLAN BY CITY OF NEWTON ENGINEERING DIVISION IMPLIES THAT THE PLAN MEETS THE MINIMAL DESIGN STANDARDS OF THE CITY OF NEWTON. HOWEVER, THE ENGINEERING DIVISION MAKES NO REPRESENTATION AND ASSUMES NO RESPONSIBILITY FOR THE DESIGN(S) IN TERMS OF SUITABILITY FOR THE PARTICULAR SITE CONDITIONS OR OF THE FUNCTIONALITY OR PERFORMANCE OF ANY ITEMS CONSTRUCTED IN ACCORDANCE WITH THE DESIGN(S). THE CITY OF NEWTON ASSUMES NO LIABILITIES FOR DESIGN ASSUMPTION, ERRORS OR OMISSIONS BY THE ENGINEER OF RECORD.
- PER CITY OF NEWTON ORDINANCE NO.8-42, COUNCIL ITEM #251-19, BUILDING SEWER, WATER SERVICE PIPE & SIDEWALK/CURB REPLACEMENT ORDINANCE, THE APPLICANT IS REQUIRED TO INSTALL/REPLACE SIDEWALK & CURB ALONG THE ENTIRE FRONTAGE. THIS SHALL INCLUDE APPROPRIATE TRANSITION TO ADJOINING CURBS & WALKWAYS, INCLUDING ACCESSIBLE CURB CUTS & OTHER ACCESS AS REQUIRED. THE ENGINEERING CONSTRUCTION INSPECTOR MAKES A DETERMINATION, BASED ON THE MATERIAL & MANNER OF CONSTRUCTION OF THE EXISTING SIDEWALK & CURB, THAT THE EXISTING SIDEWALK & CURB HAS THE ABILITY TO BE RE-SET OR REUSED WITHOUT REPLACEMENT.
- THE ENGINEER OF RECORD IS RESPONSIBLE FOR THE ON-SITE INSPECTION(S) OF ALL SUBSURFACE STRUCTURES. THIS INCLUDES BUT IS NOT LIMITED TO DRAINAGE UTILITIES (INCLUDING SEWER PIPE SHIPS), FOOT LEADER COLLECTION SYSTEMS, TRENCH DRAINS, MANHOLES, ETC. ENGINEER OF RECORD MUST ALSO CONDUCT "BOTTOM OF HOLE" INSPECTION(S) PRIOR TO SUBSURFACE DRAINAGE SYSTEM(S) BEING INSTALLED.
- PRIOR TO THE ENGINEERING DIVISION RECOMMENDING THAT A CERTIFICATE OF OCCUPANCY BE ISSUED, AN AS-BUILT PLAN MUST BE SUBMITTED. THE AS-BUILT PLAN MUST SHOW DIMENSIONAL TIES FROM FIXED POINTS (FOUNDATION CORNERS) TO ALL SUBSURFACE COMPONENTS AS WELL AS FINAL GRADING. THE AS-BUILT PLAN MUST BE STAMPED, SIGNED AND DATED BY THE ENGINEER OF RECORD.

The following statement must be on all As-Built plans submitted to the Engineering Division:
I certify that the construction so shown was inspected prior to backfill and that all work conforms with the Approved Plan and meets or exceeds the City of Newton Construction Standards.

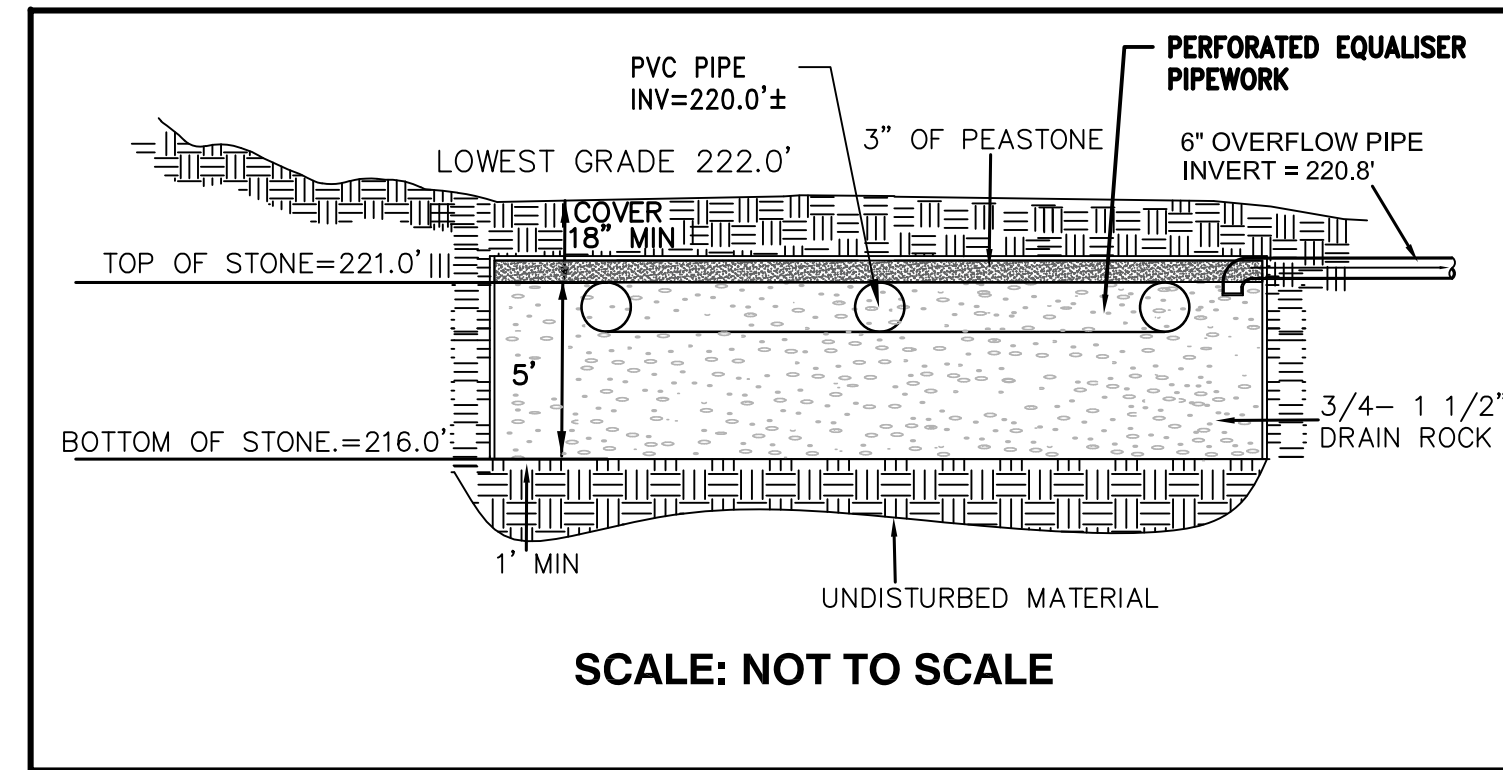
Signature Date

3.7.5 Year Moratorium - If at time of construction the roadway is under a 5-year moratorium, the roadway must be milled and paved gutter-to-gutter for a distance of 25 feet in each direction from the outermost trenches

DRAINAGE SYSTEM-1

NOTE:
CONTRACTOR TO REMOVE PEAT LAYER FROM BELOW DRAINAGE SYSTEM & REPLACE WITH DRAINAGE STONE

SYSTEM #1 REAR

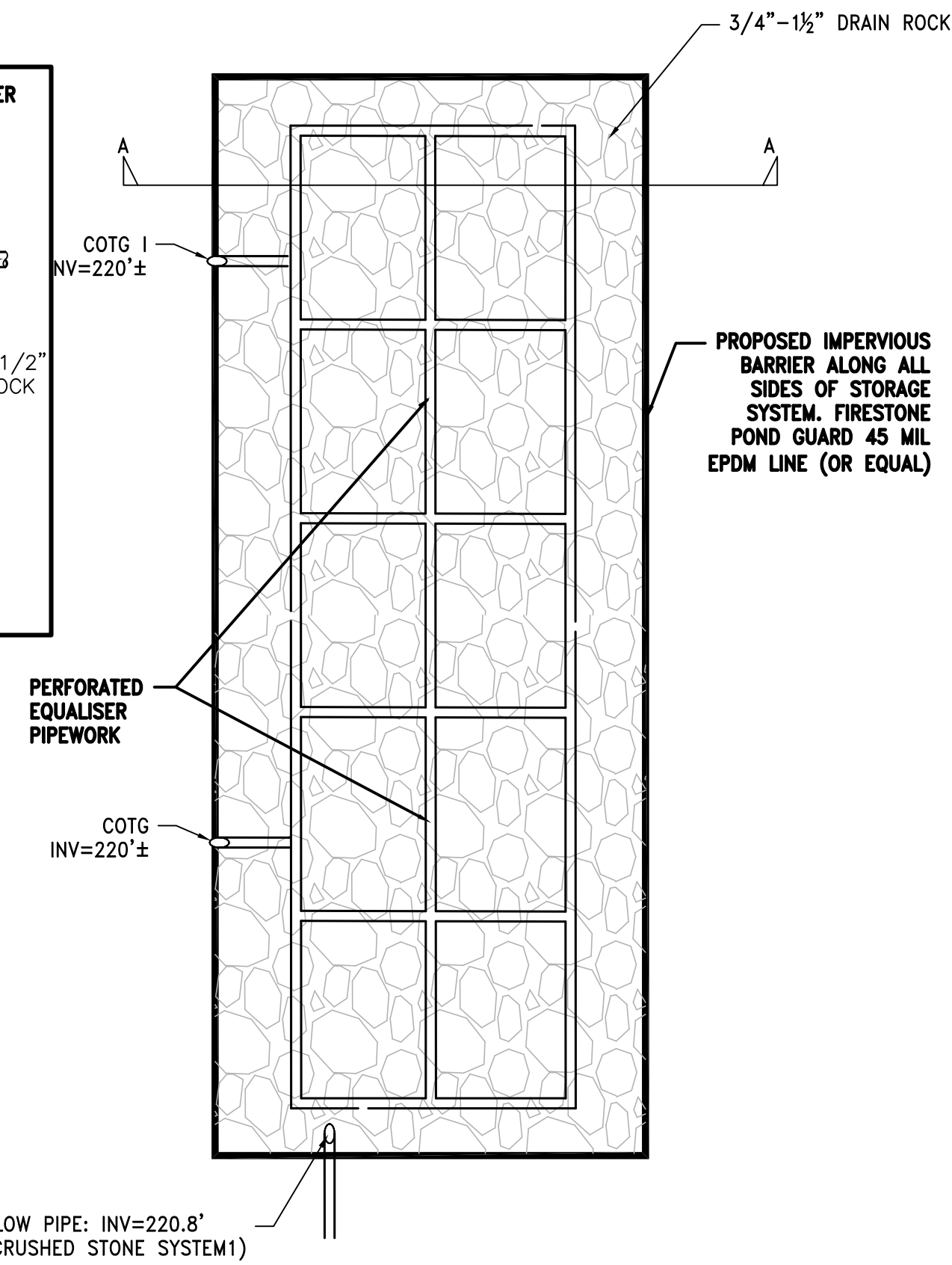


SCALE: NOT TO SCALE

DRAINAGE SYSTEM NOTES:

1. TOP OF SYSTEM SHALL BE ENCASED IN FILTER FABRIC.
2. LOCATION OF SYSTEM PER PLANS.
3. DESIGN ENGINEER WILL INSPECT AND CERTIFY IN WRITING THAT ALL DRAINAGE WORK WAS INSTALLED IN ACCORDANCE WITH APPROVED PLANS. CONTRACTOR TO NOTIFY ENGINEER AT LEAST 72 HOURS IN ADVANCE FOR DRAINAGE SYSTEM INSPECTION PRIOR TO BACKFILLING.

PLAN VIEW
DRAINAGE SYSTEM DETAIL
N.T.S.

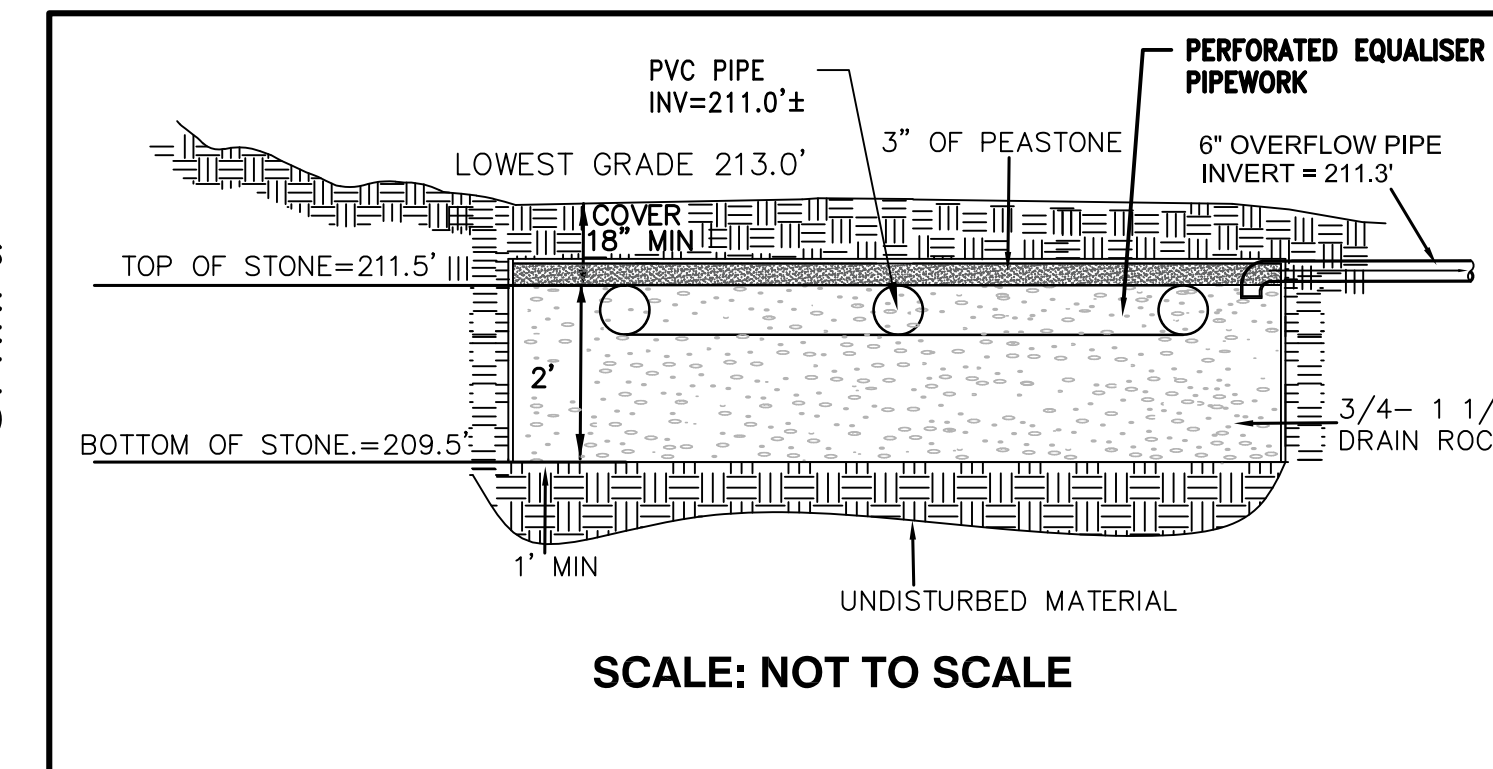


6" OVERFLOW PIPE: INV=220.8'
(TO THE CRUSHED STONE SYSTEM)

DRAINAGE SYSTEM-2

NOTE:
CONTRACTOR TO REMOVE PEAT LAYER FROM BELOW DRAINAGE SYSTEM & REPLACE WITH DRAINAGE STONE

SYSTEM #2 DRIVEWAY

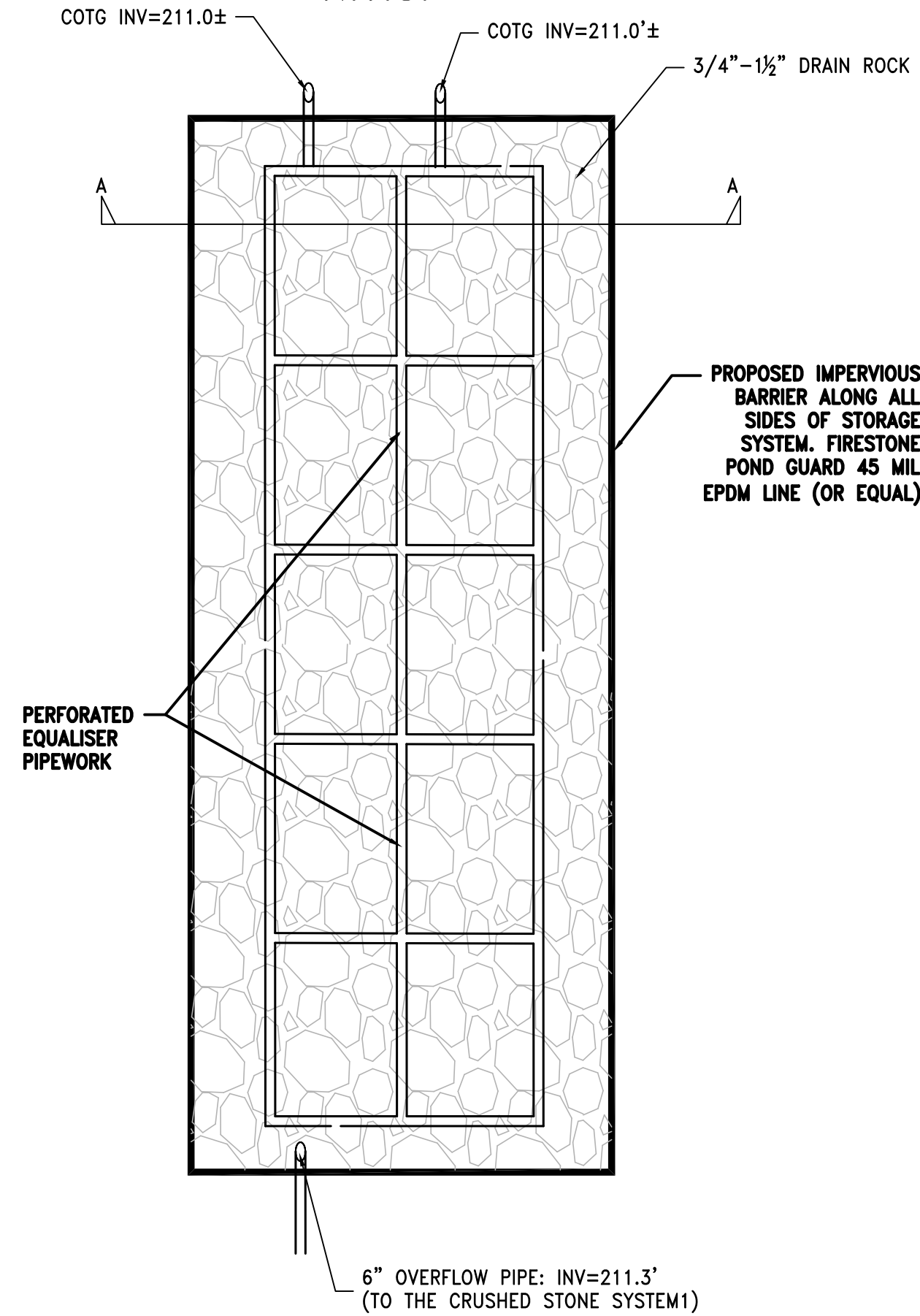


SCALE: NOT TO SCALE

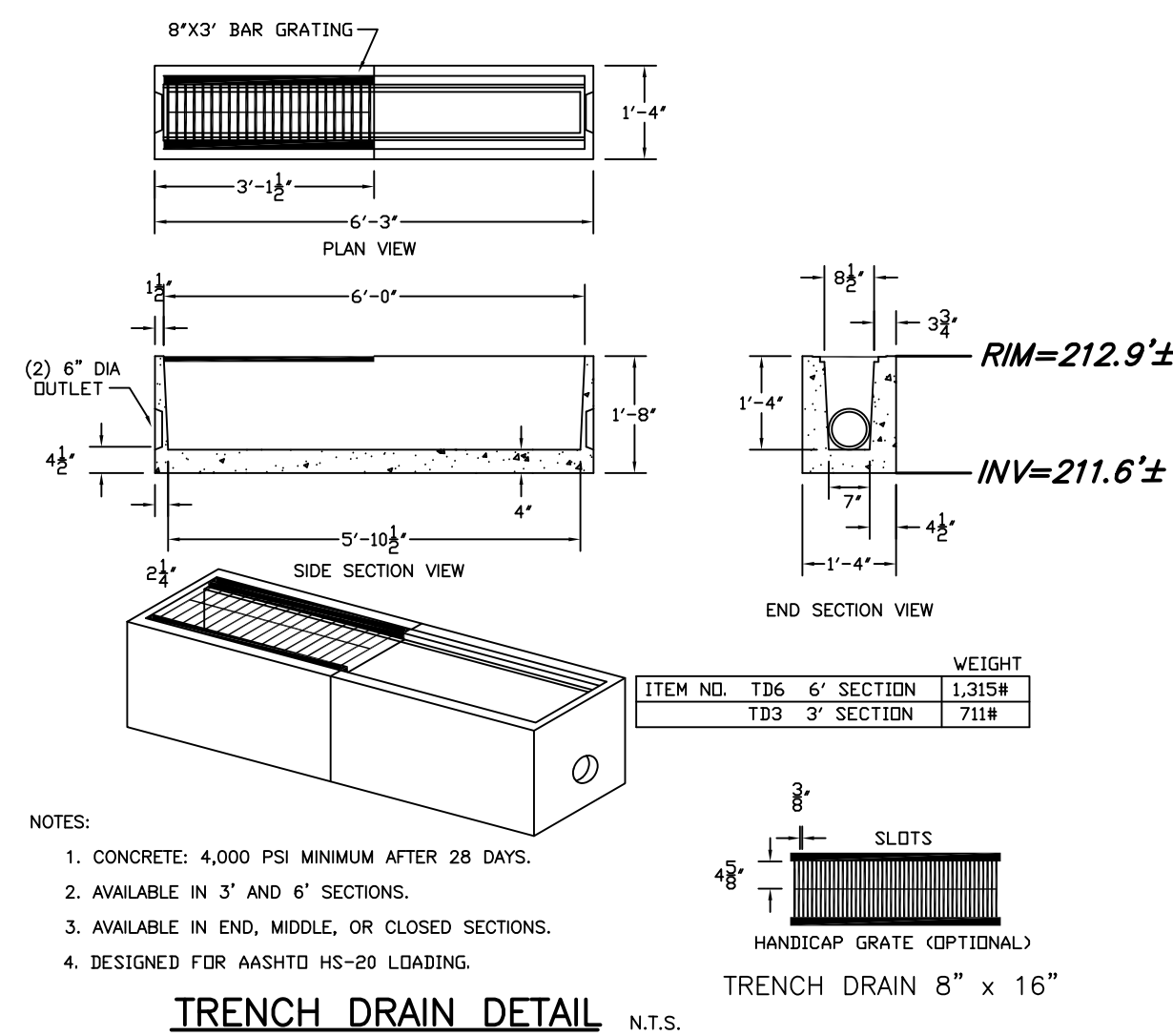
DRAINAGE SYSTEM NOTES:

1. TOP OF SYSTEM SHALL BE ENCASED IN FILTER FABRIC.
2. LOCATION OF SYSTEM PER PLANS.
3. DESIGN ENGINEER WILL INSPECT AND CERTIFY IN WRITING THAT ALL DRAINAGE WORK WAS INSTALLED IN ACCORDANCE WITH APPROVED PLANS. CONTRACTOR TO NOTIFY ENGINEER AT LEAST 72 HOURS IN ADVANCE FOR DRAINAGE SYSTEM INSPECTION PRIOR TO BACKFILLING.

PLAN VIEW
DRAINAGE SYSTEM DETAIL
N.T.S.

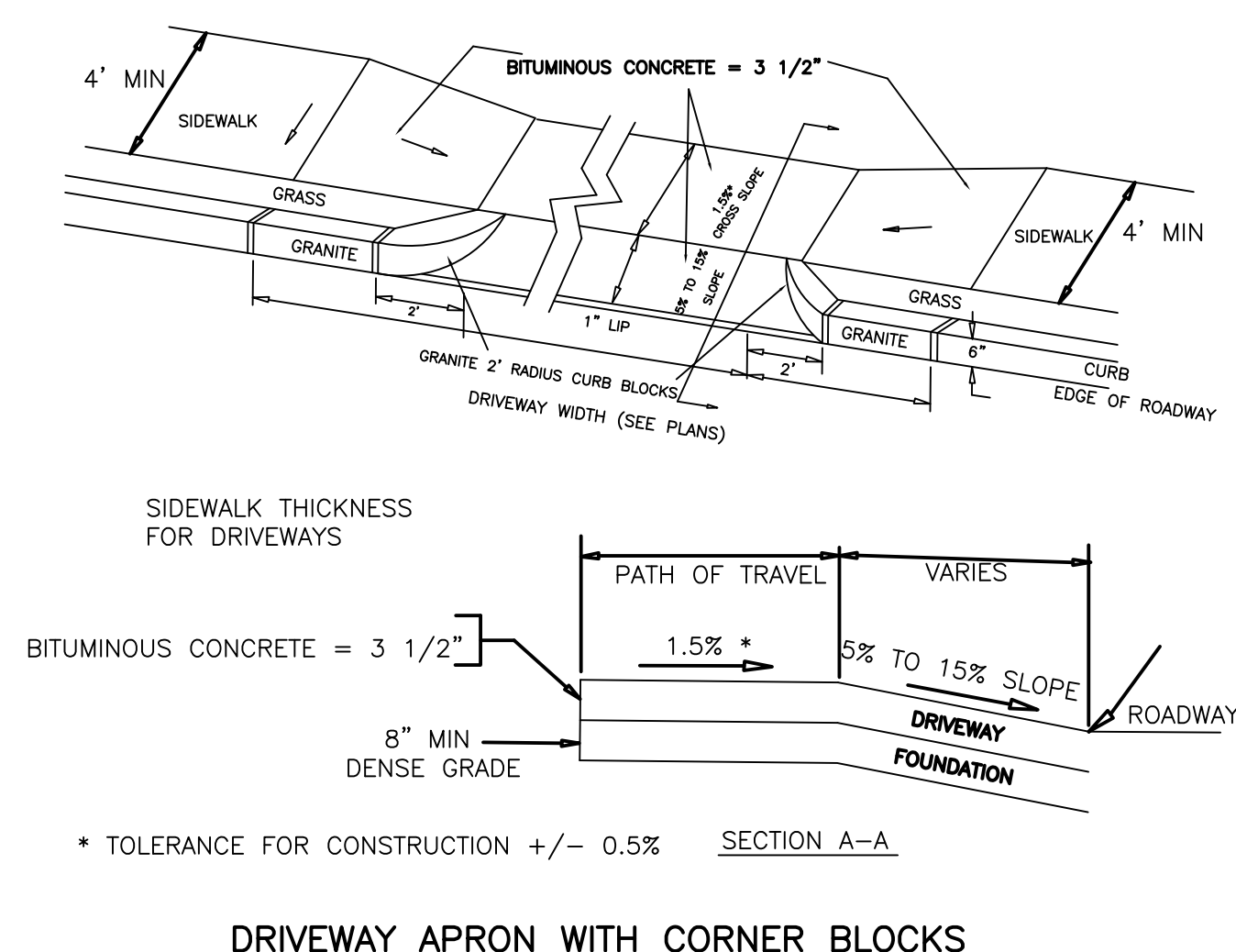


6" OVERFLOW PIPE: INV=211.3'
(TO THE CRUSHED STONE SYSTEM)



- NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
 2. AVAILABLE IN 3' AND 6' SECTIONS.
 3. AVAILABLE IN END, MIDDLE, OR CLOSED SECTIONS.
 4. DESIGNED FOR AASHTO HS-20 LOADING.

TRENCH DRAIN DETAIL N.T.S.



DRIVEWAY APRON WITH CORNER BLOCKS



Spruhan
Engineering, P.C.

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Tel: 617-816-0722
Email: espruhan@gmail.com

383-387 BOYLSTON
STREET
NEWTON
MASSACHUSETTS

SURVEY PLAN

REVISION BLOCK

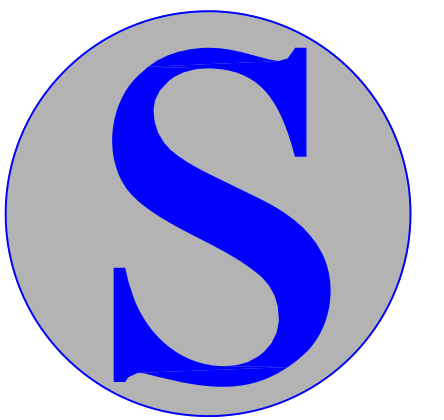
DESCRIPTION	DATE
UPDATED PER ARCHITECT REQUEST	11/3/21

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DRAFT

DATE:	3/15/2021
DRAWN BY:	D.K.
CHECKED BY:	E.S.
APPROVED BY:	E.S.

DETAILS



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80 JEWETT ST. (SUITE 1)
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Email: espruhan@gmail.com

383-387 BOYLSTON STREET
NEWTON MASSACHUSETTS

SURVEY PLAN

REVISION BLOCK

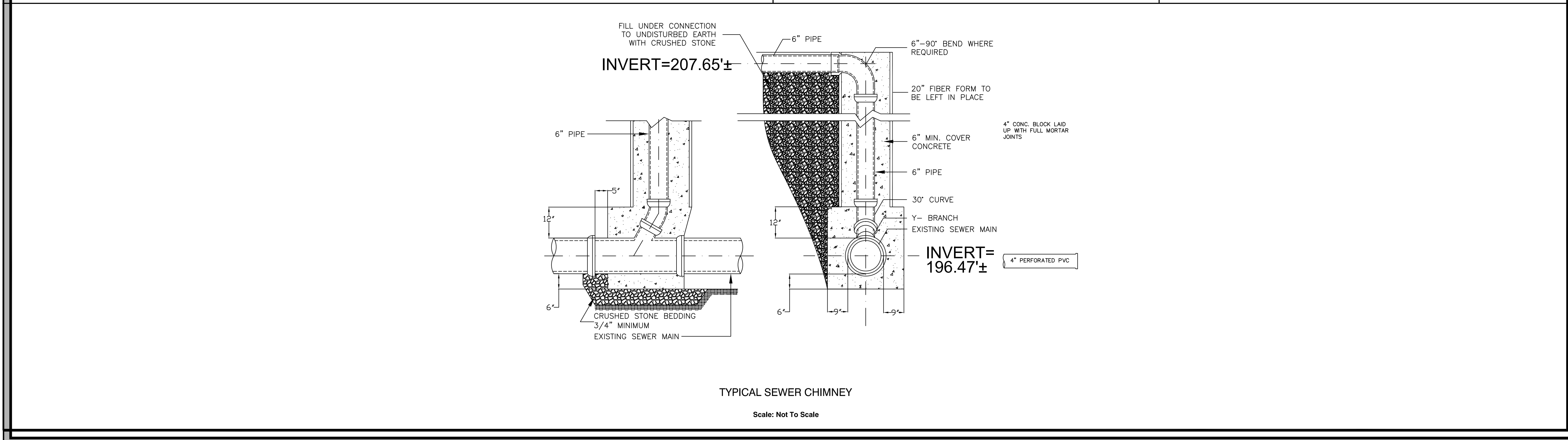
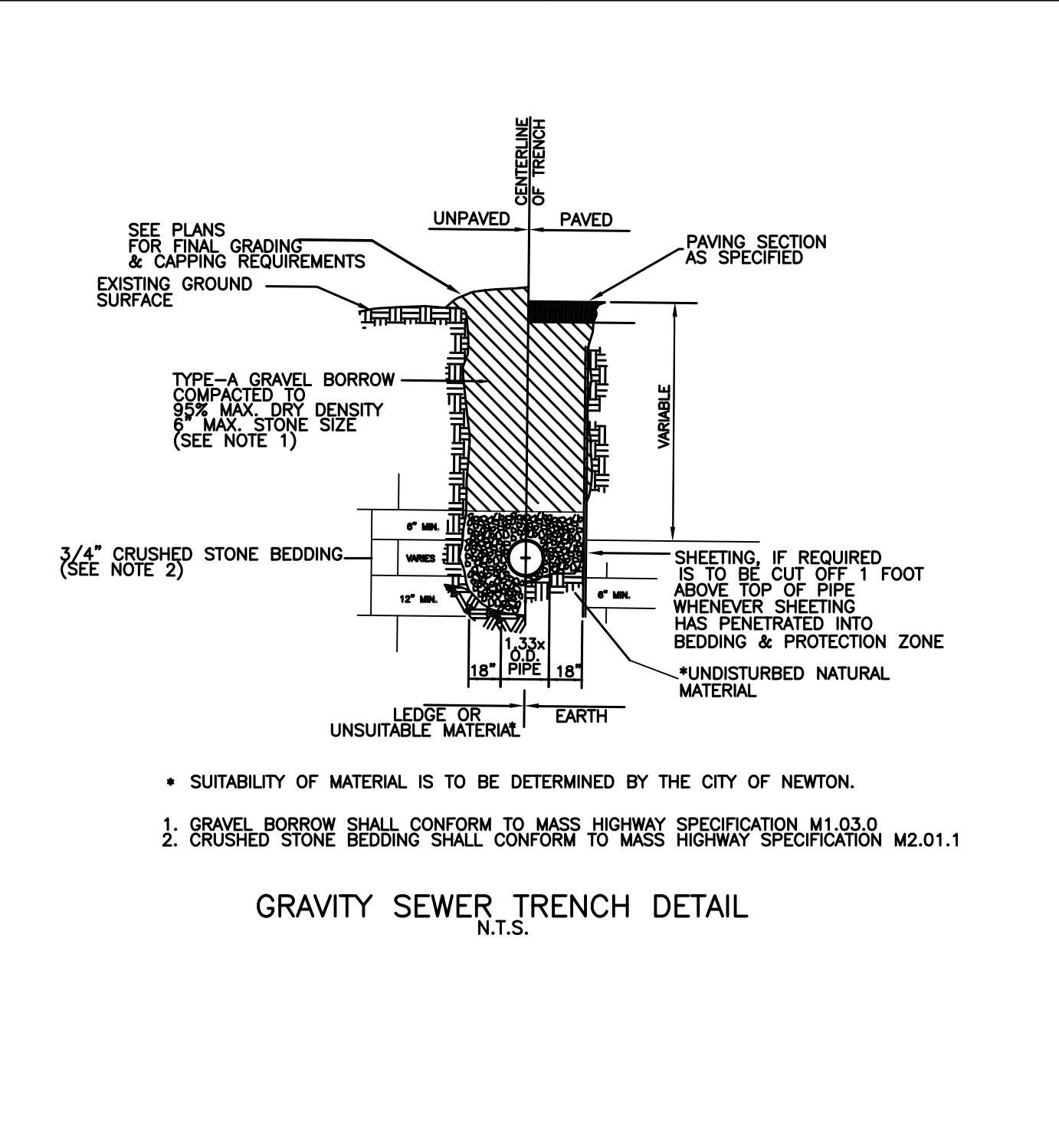
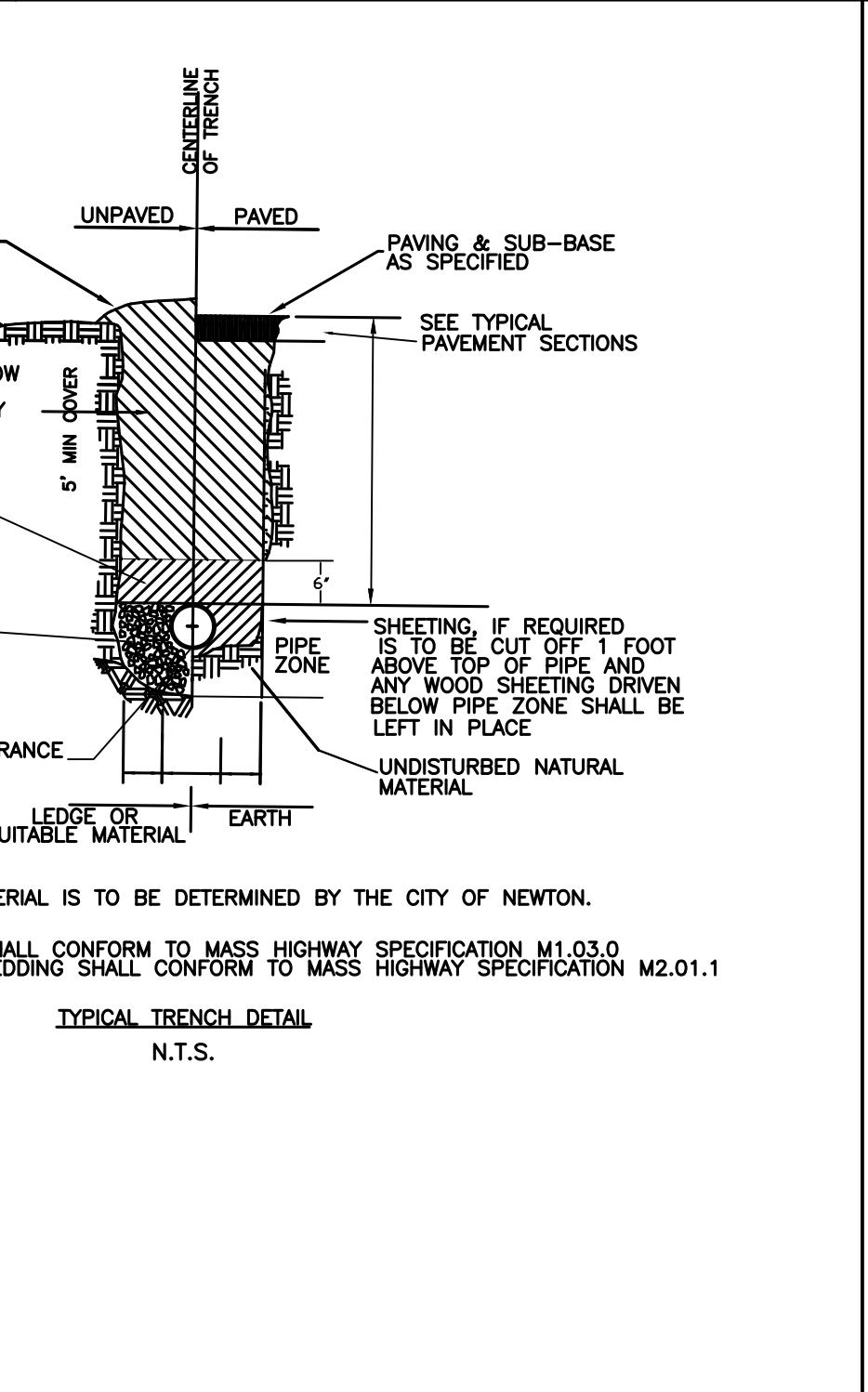
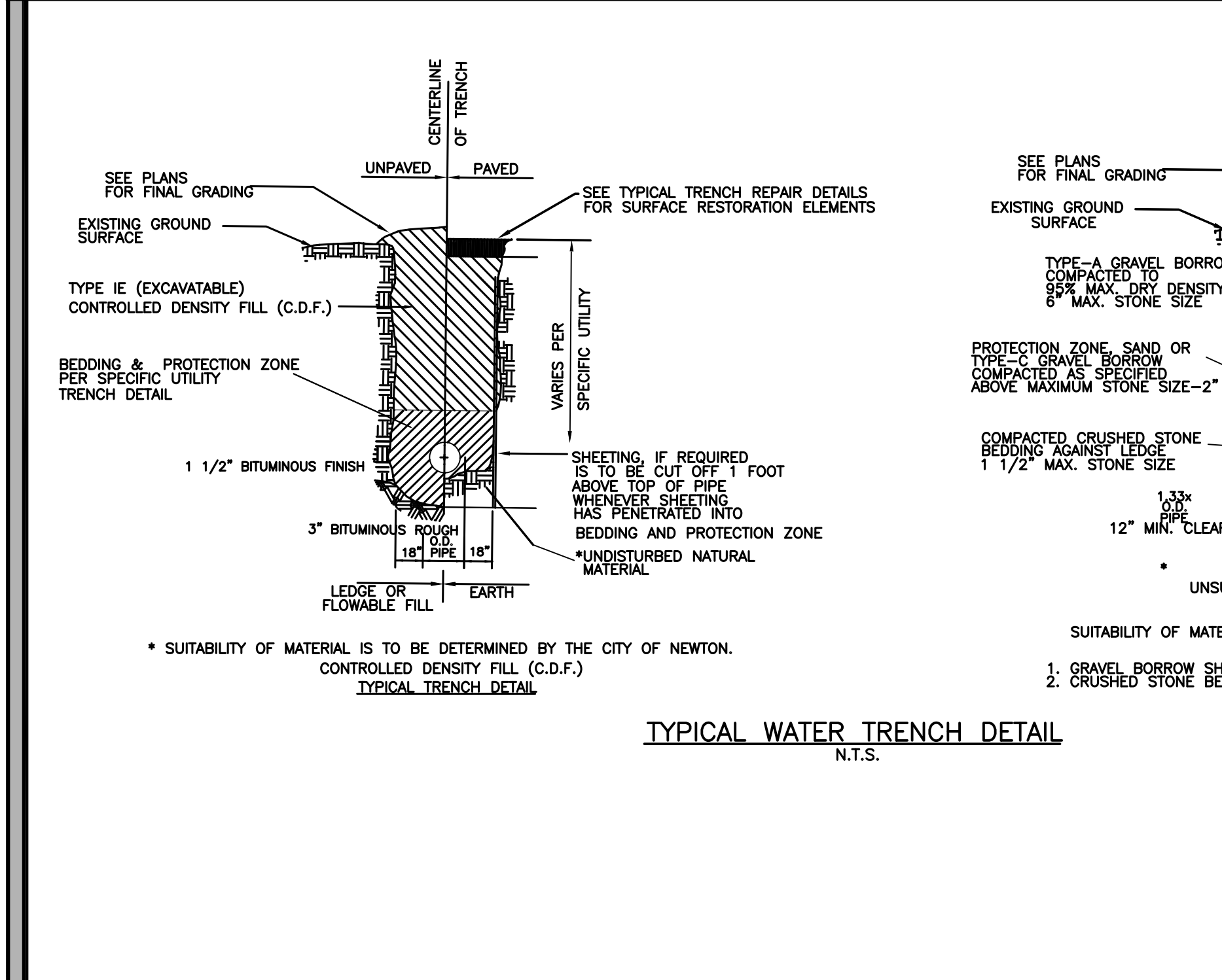
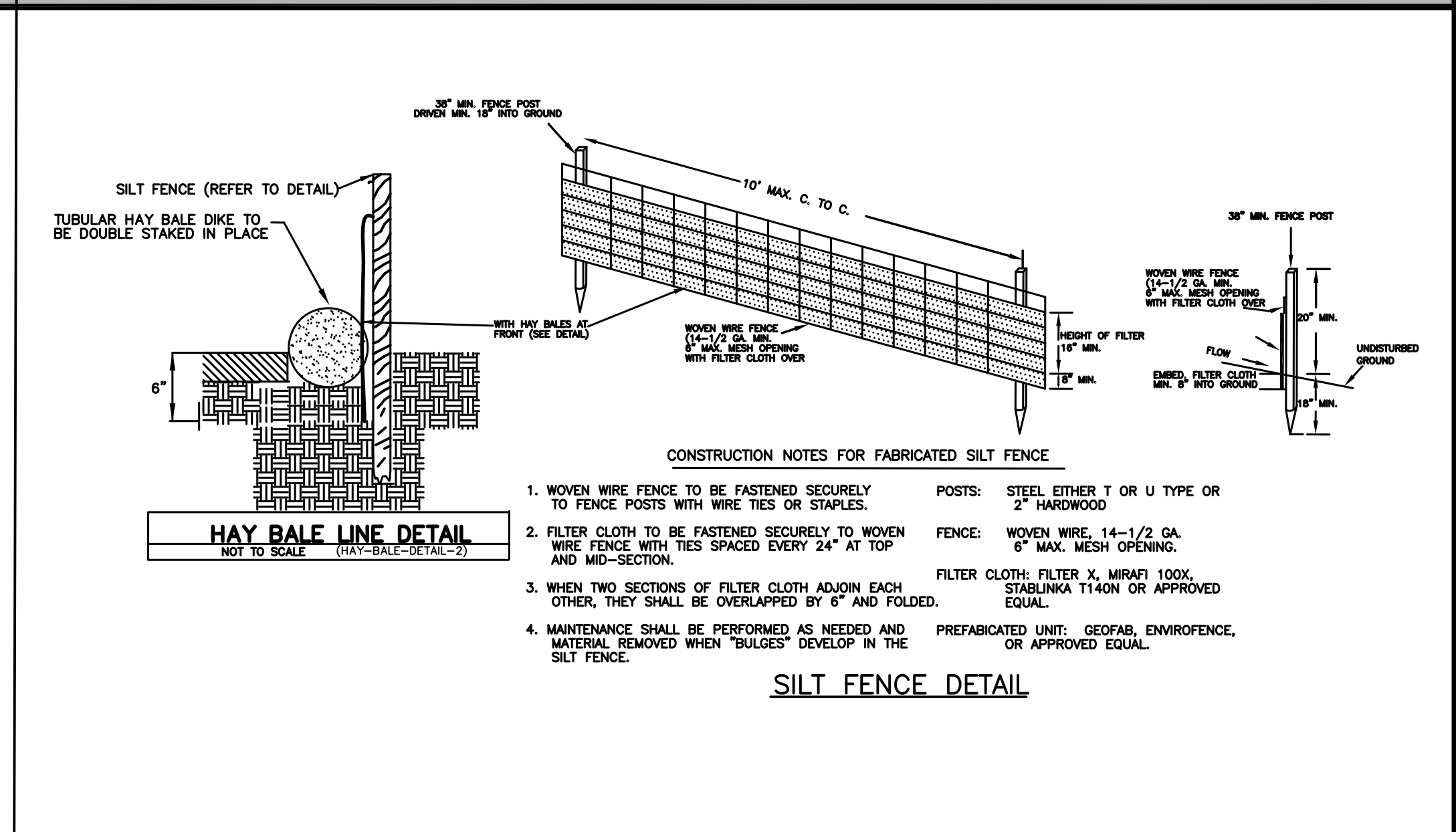
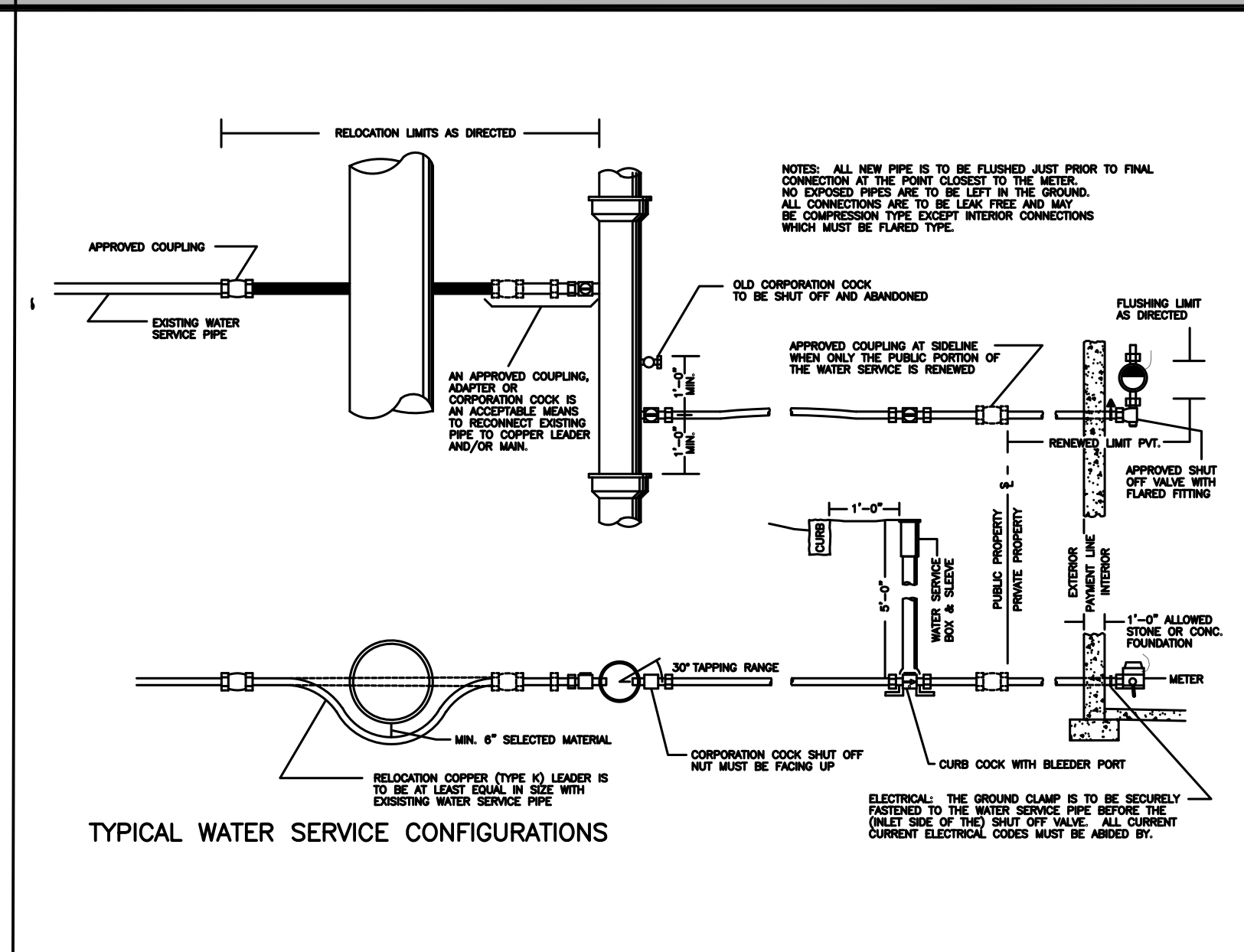
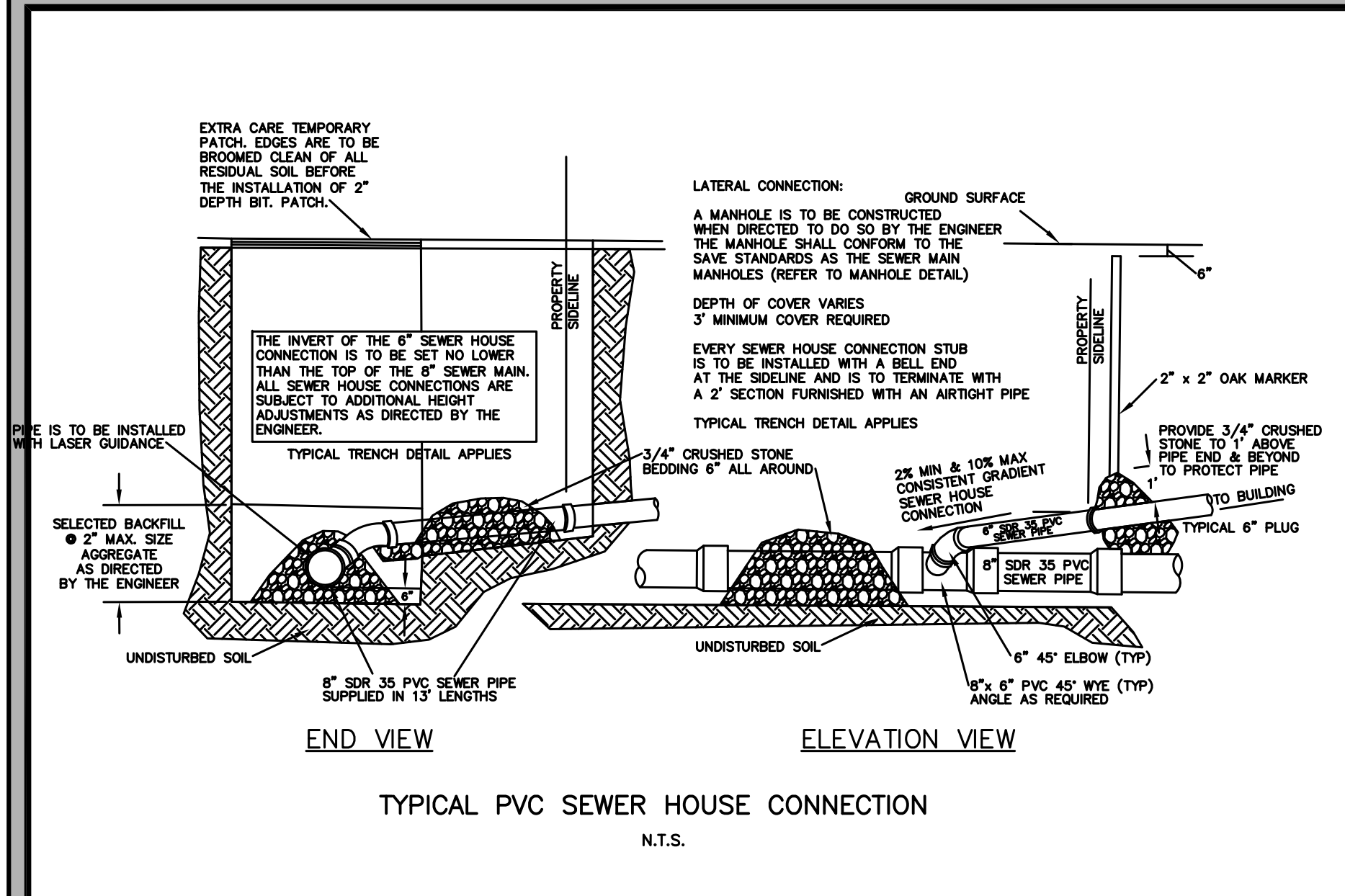
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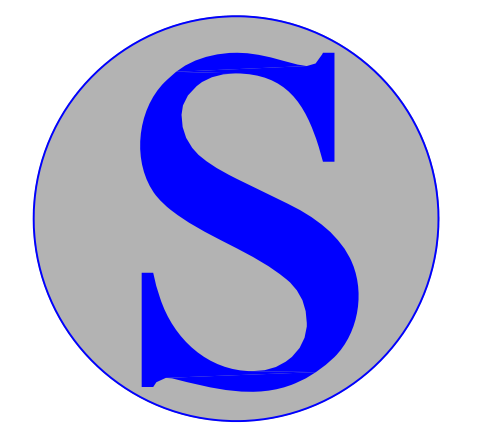
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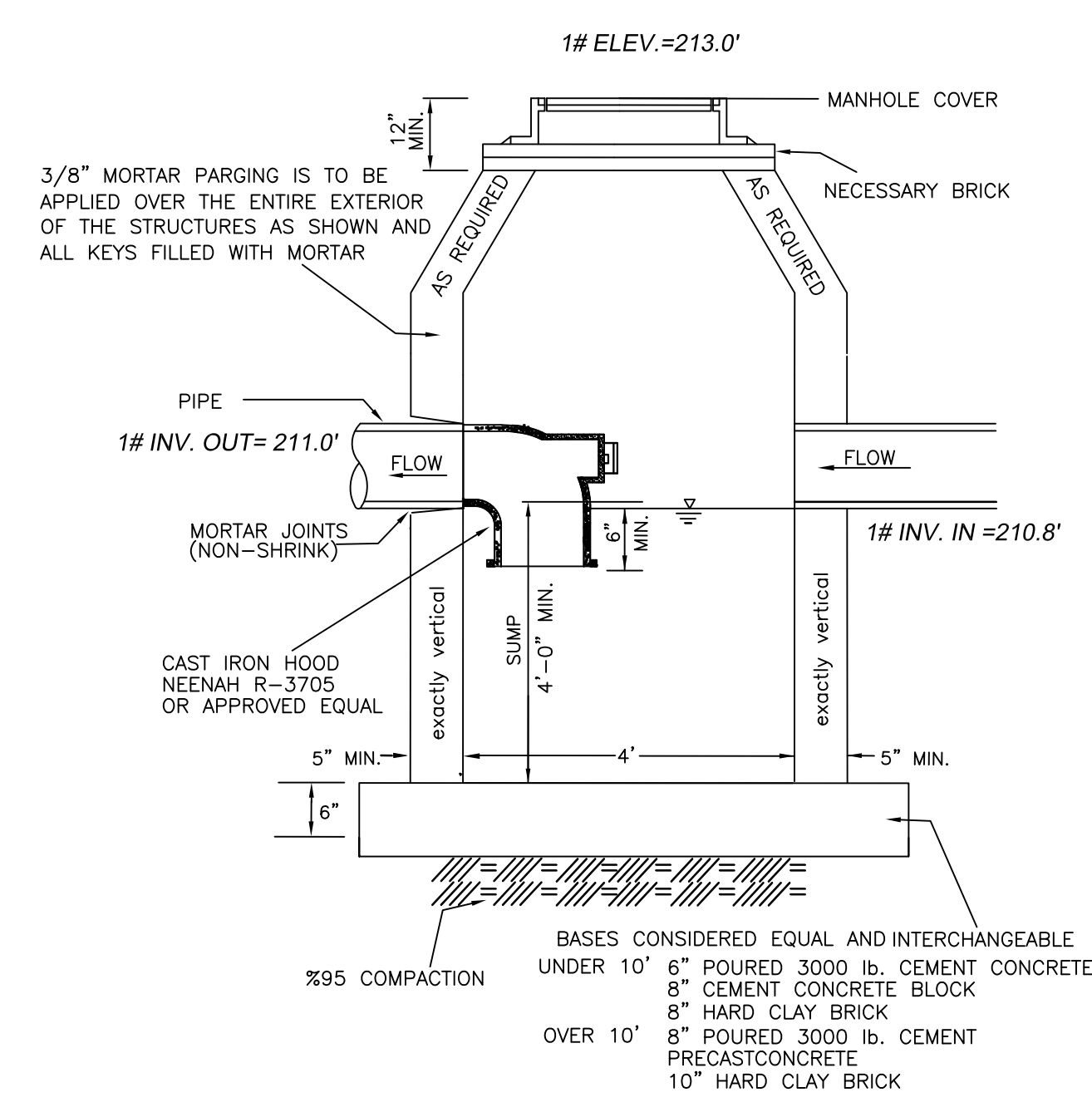
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SURVEY PLAN

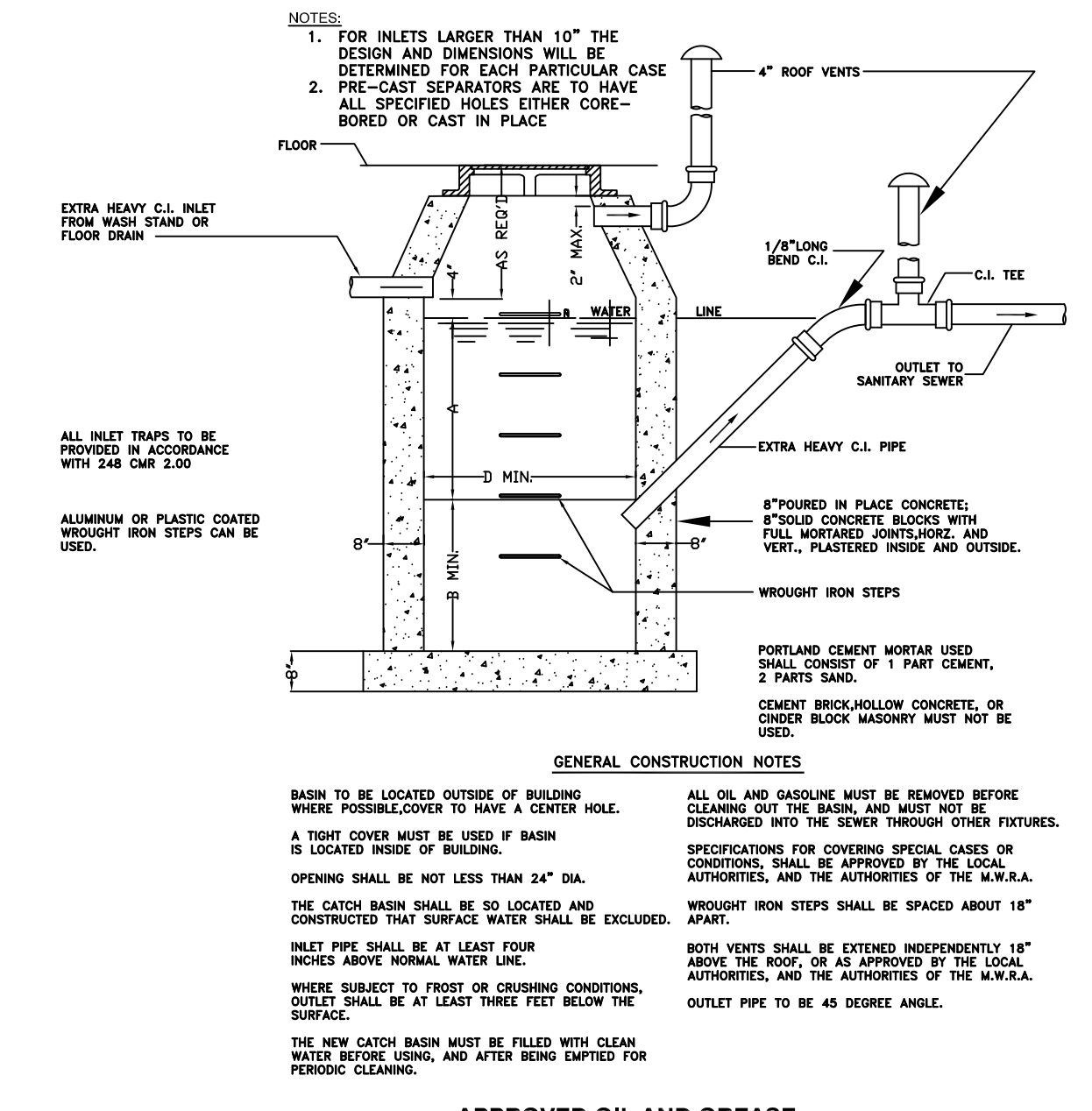
REVISION BLOCK

DESCRIPTION	DATE
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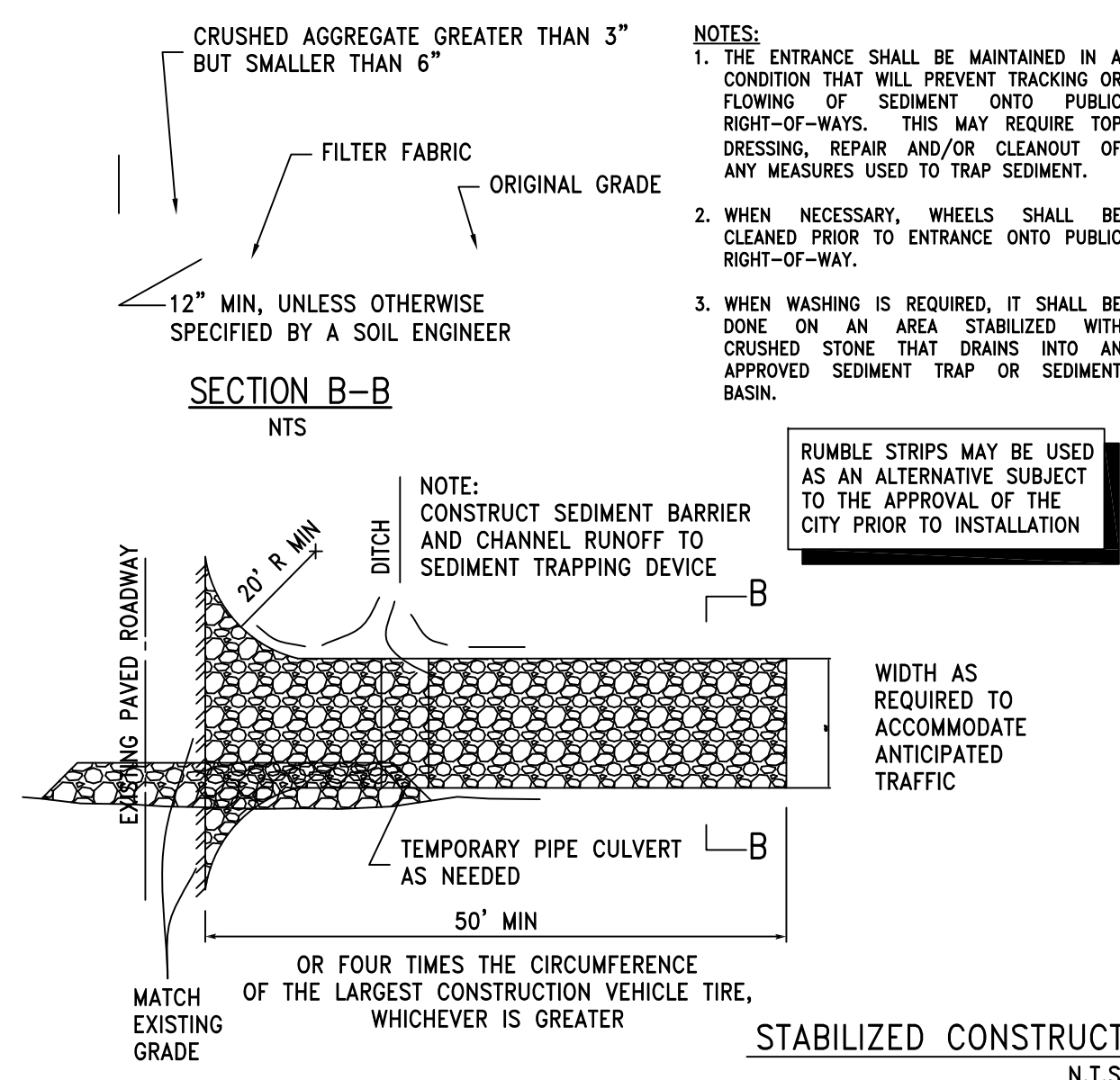


DRAIN MANHOLE DETAIL

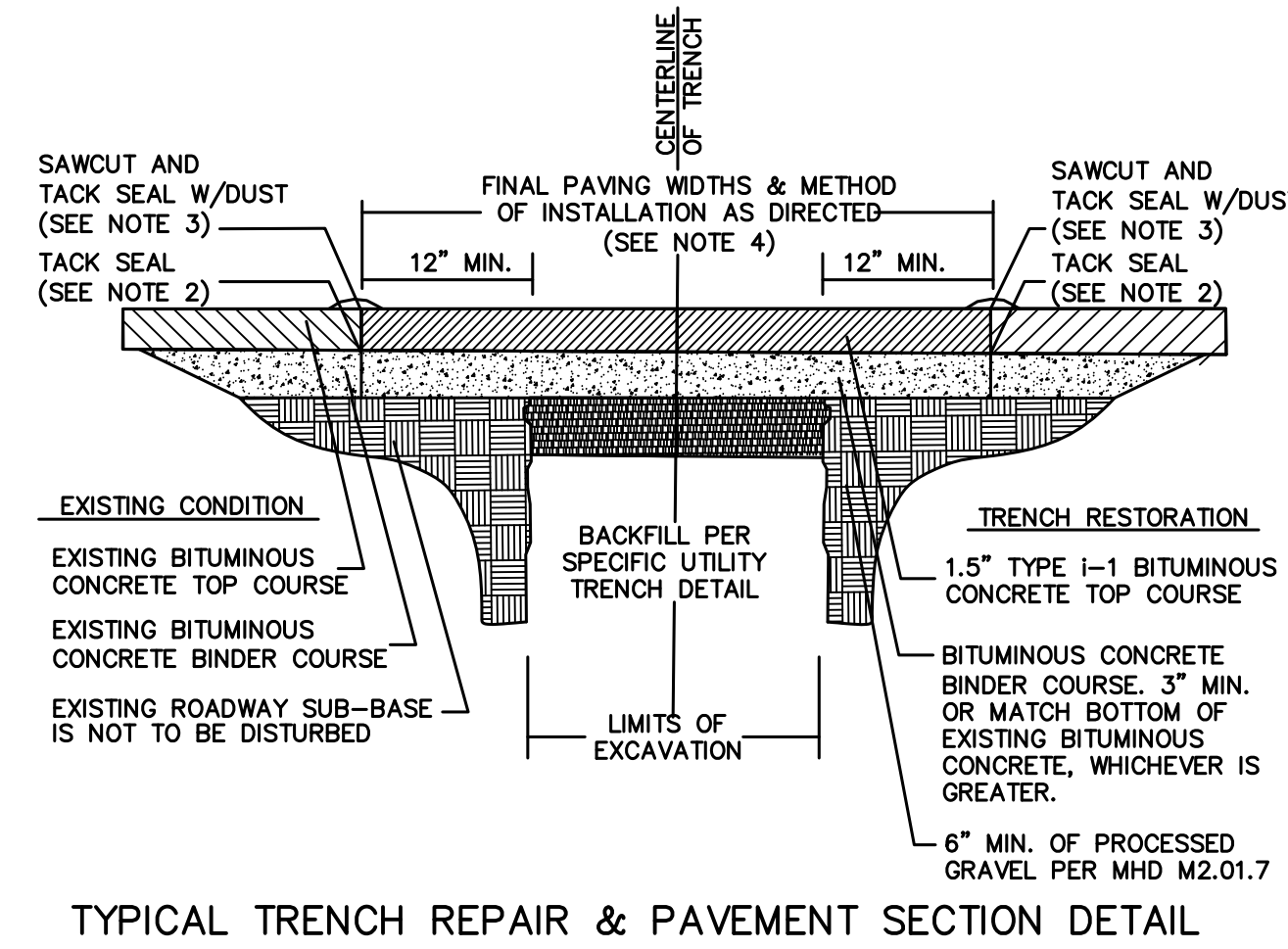
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4"	3'-6"	3'-0"	2'-8"	8"	5'-0"	6'-0"	5'-0"
5"	3'-8"	3'-0"	4'-0"	9"	5'-8"	6'-8"	4'-0"
6"	4'-0"	3'-0"	4'-0"	10"	6'-0"	7'-0"	4'-0"
8"	4'-4"	3'-0"	4'-0"	12"	6'-4"	7'-4"	4'-0"
10"	4'-8"	3'-0"	4'-0"	14"	6'-8"	7'-8"	4'-0"
12"	5'-0"	3'-0"	4'-0"	16"	7'-0"	8'-0"	4'-0"
14"	5'-4"	3'-0"	4'-0"	18"	7'-4"	8'-4"	4'-0"
16"	5'-8"	3'-0"	4'-0"	20"	7'-8"	8'-8"	4'-0"
18"	6'-0"	3'-0"	4'-0"	22"	8'-0"	9'-0"	4'-0"
20"	6'-4"	3'-0"	4'-0"	24"	8'-4"	9'-4"	4'-0"
22"	6'-8"	3'-0"	4'-0"	26"	8'-8"	9'-8"	4'-0"
24"	7'-0"	3'-0"	4'-0"	28"	9'-0"	10'-0"	4'-0"
26"	7'-4"	3'-0"	4'-0"	30"	9'-4"	10'-4"	4'-0"
28"	7'-8"	3'-0"	4'-0"	32"	9'-8"	10'-8"	4'-0"
30"	8'-0"	3'-0"	4'-0"	34"	10'-0"	11'-0"	4'-0"



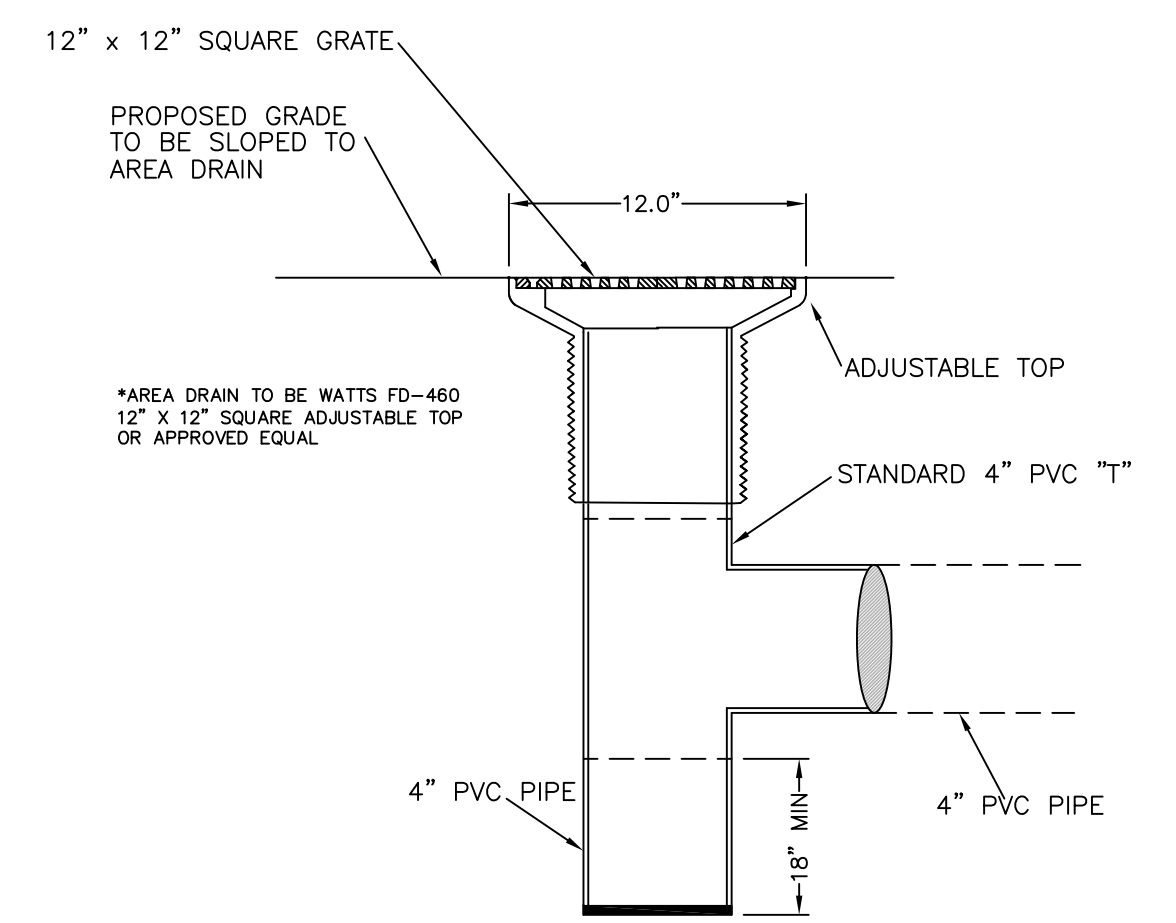
APPROVED OIL AND GREASE SEPARATOR DESIGN



STABILIZED CONSTRUCTION ENTRANCE DETAIL



- ALL INSTALLATION AND MATERIAL SPECIFICATIONS PER MASS. HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 AS AMENDED.
- ALL EXPOSED BITUMINOUS CONCRETE IS TO BE TACKED PER MHD PRIOR TO NEW BITUMINOUS CONCRETE INSTALLATIONS.
- ALL EXPOSED JOINTS ARE TO BE SEALED WITH TACK AND STONE DUST.
- ANY TOP COURSE APPLIED AT A WIDTH OF 6' WIDE OR GREATER IS TO BE PLACED BY MACHINE/BAK SPREADER WHEN & AS DIRECTED BY THE CITY OF NEWTON.



FLOOR DRAIN DETAIL

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